NATIONAL PETROLEUM NEWS

Volume 34 | April 29, 1942 | Number 17

CALIFORNIA STATE LIBRARY

Retail 'Gas' Prices Frozen . . Page 3

Care for your Car . . . for your Country

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Put the slogans "Oil is Ammunition, Use it Wisely" and "Care for Your Car—For Your Country" on the lips of every service station operator and attendant in the nation and fix it in the mind of every car owner. Write the Petroleum Industry War Council, 712 Chanin Bldg., New York, N. Y., for details on the part YOU can play in making the P.I.W.C. conservation campaign work miracles in saving petroleum products.

Refining Edition

Compiles Absorber Performance Data

Plant performance data on refinery absorbers operating on cracking coil gas shows the effectiveness of intercoolers in increasing the recovery of lighter components, whose value is increasing for materials for aviation gasoline and other essential wartime products. Complete data on full-scale operations is given for both winter and summer. Page R-134.

Claim New Source Of Aviation 'Gas'

New sources of components of high-octane aviation gasoline are claimed to be available, within the natural gasoline and refining industries, through hydrofluoric acid alkylation. This new process is said to alkylate propylenes as well as butylenes, while sulfuric acid alkylation is limited to butylenes as the olefin in the reaction. Page R-131.

Refinery Control Proposed for Gulf

HOUSTON — Wartime month-to-month control of District 3 (Gulf Coast) refinery operations is proposed in plan submitted to OPC for study. Aimed at obtaining maximum output of war products, plan would give OPC power to issue monthly recommendations on yields and throughput. Page 15.

Urge House Probe Of 'Gas' Rationing

WASHINGTON — Congressional probe of gasoline rationing is called for in new House bill. At same time, dealer protests over the OPA's card rationing plan rise and Plymouth Oil president issues strongly-worded statement against OPA's system. Pages 3, 4, 5.

Wildcatting Need Told to A.A.P.G.

DENVER—American Assn. of Petroleum Geologists, at 27th annual convention here April 22-24, are told a "more vigorous" wildcatting campaign is necessary to maintain a satisfactory discovery rate. Wildcats, decreasing since 1937, showed slight gain in 1941. Page 28.

Ickes Gives Views On Transportation

WASHINGTON—Oil's transportation problems are discussed by Co-ordinator Ickes at his weekly press conference, attention centering on possible use of wooden barges to haul fuel oils to East Coast. Page 19.

Wisconsin Depends On Trucks for Oil

MADISON, Wis. — Applications from 12 to 15 truckers to institute service in intrastate movements of petroleum products in Wisconsin have been filed since tank cars have been withdrawn as a government war measure. Page 26.

NEWS BRIEFS

Non-Profit synthetic rubber plant planned in Texas. Page 16.

* * *

Gulf Coast now has no tankers, I.P.A.A. told. Page 14.

* * *

OPC recommendation limits asphalt use in District 1. Page 10.

* * *

Refiners hunt for scrap as campaign gains headway. Page 16.

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Tank cars to East haul 599,500 bbls. daily. Page 19.

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FDR calls conference to discuss trade barriers. Page 19.

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Empty mileage penalty on tank cars removed by ICC. Page 22.

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Overland transportation could replace tankers in 6 months—Davies. Page 22.

* * *

OPC transportation division reorganized into 6 sections. Page 26.

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Heating oil contracts halted by OPC recommendation. Page 8.

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OPA allows 16% hike in prices of new tires and tubes. Page 8.

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Switch of split stations to 100% accounts halted by OPC. Page 8.

BULLETINS

U. S. CRUDE OUTPUT

NEW YORK—U. S. crude production the week ended April 25 was up 36,500 bbls. daily at 3,545,000 bbls., according to figures of American Petroleum Institute. Most districts showed increased rates, with Texas the greatest, up 34,750 bbls. daily.

* * *

CASH DISCOUNTS

WASHINGTON—Cash discounts on purchases of petroleum products, in effect on Oct. 15, 1941, must be maintained, according to an interpretation of Price Schedule 88, Price Administrator Henderson announces. Purchasers who have been deprived of such discounts are invited to inform OPA so that appropriate steps may be taken to enforce compliance.

Hearing on Rubber From Farm Alcohol Opened by Gillette

WASHINGTON—Gillette Senate committee opens hearings on synthetic rubber from farm alcohol, first taking secret testimony from former "alky-gas" advocates. Proponents claim farm process cheaper than from petroleum. Page 9.

OPC Asks Deep Cut In May Production

WASHINGTON — OPC cuts state production quotas for May to 3,474,500 bbls. daily—off 192,000 bbls. Texas, hardest hit with a 20% cut, holds up issuance of its May proration order pending outcome of appeal to OPC. Kansas Governor also asks higher quota. Page 17.

OPC Moves to Halt Well Abandonment

WASHINGTON—A halt on abandonment of oil and gas wells unless such wells are "actually incapable of production because of depletion of the reservoir or because of failure to find oil or gas in commercial quantities" is directed in Recommendation No. 47. Page 18.

MERCHANDISING

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- HELPING YOU TO *CARRY ON!*

Winning the war is America's all-out objective. And winning the war means carrying on our daily tasks with courage, efficiency and determination. The responsibility of the petroleum and allied industries is all important; both in its military and civilian aspects. Your work in supplying civilian needs for defense is vital to victory.

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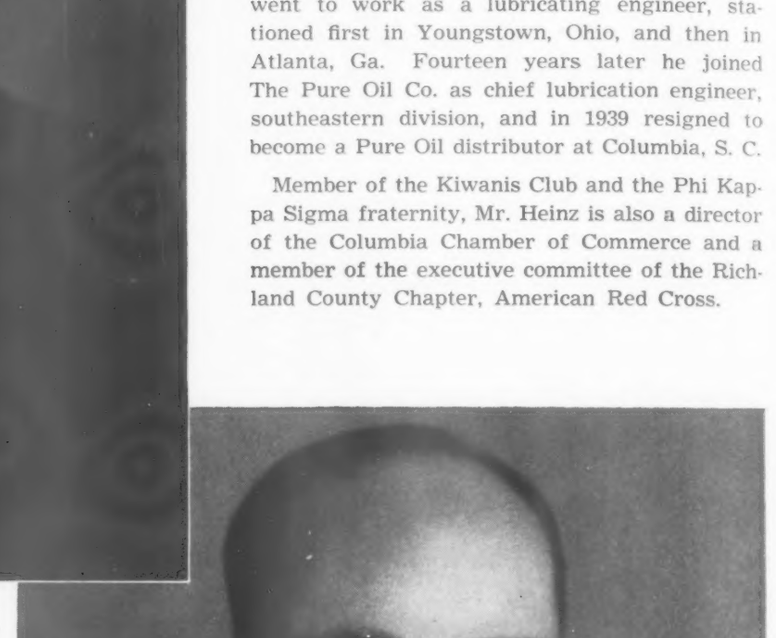
Two Engineers Direct South Carolina Jobber Activities

William L. Heinz—President

● "I'm a (censored) engineer" is a description graduates of Georgia Tech modestly apply to themselves, and so it is with President William L. "Bill" Heinz of the South Carolina Oil Jobbers Assn. who graduated from the Georgia School of Technology in 1911 with a B.S. degree in Mechanical Engineering and a short six years later began an 18-month stretch of service with the Army in France, winding up with a Captaincy upon his discharge in 1919.

The Texas Co. claimed him that year, and he went to work as a lubricating engineer, stationed first in Youngstown, Ohio, and then in Atlanta, Ga. Fourteen years later he joined The Pure Oil Co. as chief lubrication engineer, southeastern division, and in 1939 resigned to become a Pure Oil distributor at Columbia, S. C.

Member of the Kiwanis Club and the Phi Kappa Sigma fraternity, Mr. Heinz is also a director of the Columbia Chamber of Commerce and a member of the executive committee of the Richland County Chapter, American Red Cross.



Dan H. McEachern—Vice-President

● S.C.O.J.A. Vice-President Dan H. McEachern, like President Heinz, is an engineer (electrical), but he entered a different branch of service during World War I, being a chief machinists mate, U. S. Navy, with the Fourth Patrol Squadron based at Brest and Lorient, France.

Mr. McEachern graduated from Alabama Polytechnic Institute in 1915 and after returning from France became engaged in the automobile business. In 1930, he organized the Carolina Gas & Oil Co. at Florence, S. C., which he has actively headed since.

In addition to his oil industry activities, Mr. McEachern is connected with the Carolina Rubber Co. and the Pepsi-Cola Bottling Co. He's a director of the Guaranty Bank & Trust Co. and has served as president of the Florence Chamber of Commerce, president of the Florence Kiwanis Club, and Lieutenant-Governor of Kiwanis in the Carolinas District.

NATIONAL PETROLEUM NEWS

VOLUME 34 WEDNESDAY, APRIL 29, 1942 NUMBER 17

OPA Sets May 18 to Freeze All Retail Gasoline Prices

NPN News Bureau

WASHINGTON — Retail gasoline prices throughout the U. S., except in the East Coast area, have been placed under a ceiling based on the highest prices charged by each individual seller during the month of March, 1942, according to announcement April 28 by Price Administrator Henderson.

These price ceilings were established by OPA in Maximum Price Regulation No. 137. The maximums become effective May 18, 1942.

In the East Coast area (17 states and the District of Columbia), service stations will be allowed to charge the highest prices prevailing during March, 1942, plus 0.4c in the case of gasoline and 0.2c in the case of diesel fuel, OPA said.

To Adjust Eastern Prices

"Allowance is being made for the increase over present levels in the Atlantic Seaboard area to bring this market into adjustment with the present transportation conditions as the general maximum price regulation goes into effect, announcement said. Due to abnormal war conditions, much gasoline customarily moving into this territory via ocean tanker now is being moved by tank car. OPA previously had made arrangements to cover these costs. Subsequent to March 31, 1942, OPA permitted similar increases in wholesale prices of gasoline and diesel fuel in these same eastern states and the District of Columbia."

This announcement, issued late April 28 after Mr. Henderson had disclosed plans for his blanket price "freeze", indicates that crude oil and prices (except for certain specialty items) will *not* be included in blanket price "freeze" announced April 28 by Price Administrator Henderson.

Also, administration of oil prices will continue in the hands of OPA's fuel unit, headed by Dr. George W. Stocking, and will not be transferred to some of the new agencies which Mr. Henderson will set up to handle the blanket "freeze".

To Cancel No. 11

All oil prices (except retail and certain specialties) were covered in Price Schedule 88, which automatically exempted them from the blanket "freeze". Retail gasoline prices in the 17

(*Continued on page* 6)

Henderson States Views On Retail Margins

NPN News Bureau

WASHINGTON — Speaking of retail margins generally, Price Administrator Henderson at his press conference April 28th said:

"In considering the 120 price schedules we have already issued, we have approached the matter from the standpoint that it is not necessary to maintain a margin or even a profit ratio that prevailed on a larger volume of business previously.

"The first question is, how much of the cost increase can be absorbed by the retailer, then decide how much can be rolled back to the consumer."

East Coast Price Hike Granted by OPA To Cover Higher Transportation Costs

NPN News Bureau

WASHINGTON — Price increases for petroleum products for East Coast area were given approval by Office of Price Administration in Amendment No. 10 to Revised Price Schedule 88, issued Tuesday night (April 28).

For all states, except the District of Columbia area and Georgia and eastern Florida, gasoline prices (presumably tank car, tank wagon or retail) can be 1.2c above prices prevailing last October as determined by Section 1340.159 (B) (1)-(3) (lowest published quotations).

For the District of Columbia and nearby communities in Virginia and Maryland an additional 0.5c (making 1.7c in all above October, 1941 levels) on gasoline was allowed.

Advances Vary

For Georgia and Florida east of the Apalachicola river, an increase of 0.9c on gasoline above October, 1941, was allowed. This amounts to an increase of 0.4c per gal. on gasoline above the price advances permitted in Amendment No. 4, dated March 25.

Advances of 0.2c per gal. on Nos. 2, 3 and 4 fuels, gas oils, tractor fuel and distillate Diesel fuels were allowed. Heavy fuels were advanced 25c per bbl. over March 25 increase.

No advances were approved for kerosine or range oil (No. 1 fuels).

Full text of Amendment No. 10 appears on page 6.

OPA Changes Basis Of Eastern Prices

NPN News Bureau

WASHINGTON — Office of Price Administration has issued Amendment No. 8 to Revised Price Schedule 88 which changes basis for East Coast gasoline prices back to comply with provisions in the Revised 88.

In Amendment No. 4, dated March 25, approving price advances for gasoline in East Coast States, basis for calculating maximum permissible prices was given as Oct. 1, 1941.

Now, under Amendment No. 8, the basis is changed back as it appeared in Section 1340.159 (B) (1) to (3), which is the lowest published quotation appearing in Oct. 2, 1941, issue of *Platt's Oilgram*, and *Chicago Journal of Commerce* and Oct. 8, 1941, issue of NATIONAL PETROLEUM NEWS (or other publications designated by OPA).

Weiss Urges House Probe Of Rationing

NPN News Bureau

WASHINGTON — News of gasoline rationing had scarcely had a chance to seep into the outermost corners of the East Coast before a Congressional investigation was demanded by Rep. Samuel Weiss, Dem., Pa., who also wants to close all stations, coast to coast, from 7 to 7.

On April 27, he introduced a resolution calling for appointment by the Speaker of the House of a 5-man committee to conduct an investigation which would "aid in the drafting of a proper rationing plan for gasoline which can be done if it is approached with the idea of rationing only where it is absolutely required and by methods as gradual as possible."

Loose Now, Tighten Later

He favored loose rationing restrictions, to be tightened later, instead of stringent restrictions at first, to be loosened later.

There is no doubt, Rep. Weiss said in a statement, that "motoring as usual" is out, but there are some sections—and he cited industrial areas of his home state—where the car is essential to war production. He said Pennsylvanians had difficulty in understanding why surplus gasoline was shipped from Western Pennsylvania into unrationed Ohio.

* * *

Eastern Retailers Attack Rationing

NPN News Bureau

NEW YORK — East Coast gasoline dealers are hostile to plans for consumer card rationing of gasoline announced by OPA April 22 to become effective in eastern states May 15, according to statements by leaders of dealer organizations. Plan as formulated by OPA is regarded as too uncertain and includes too great a possibility for inequality since dealers will have no evidence of having punched customer's card at the time of sale. With such evidence lacking, it is found that drivers will try to apply pressure tactics to dealers in an attempt to get more than their entitled amount.

Possibility of counterfeit cards

was another point of objection, and resentment was expressed over dealers being made a "political football" between government agencies.

Dealers feel that dealer curtailment program now in effect has not been given fair trial; that its success has been indicated and that with a few revisions as to methods of computing gallonage and to assure co-operation with program it would have achieved desired reduction in consumption.

Gasoline Station Council of Metropolitan New York met here April 27 to discuss consumer rationing plans and to draft protest to OPA's projected punch-card plan. Council's formal protest and substitute program were expected to be wired tonight to all government agencies involved.

Meeting has been called of Eastern States Gasoline Dealers Conference here April 30 at which direction of conference's opposition to OPA plan will be determined.

Hallanan Hits 'Gas' Rationing

NPN News Bureau

CLEVELAND — "Half-baked, ill-advised and hit-or-miss" is the description applied by Walter S. Hallanan, Pittsburgh, president of Plymouth Oil Co., to Office of Price Administration's gasoline card rationing plan which goes into effect May 15 throughout District 1.

"Nothing could more seriously dislocate our domestic economy and the war effort than an unnecessary restriction of gasoline supply in the great industrial Eastern area," said Mr. Hallanan, who is chairman of the District 1 production committee and a member of the Petroleum Industry War Council. His statement on the rationing plan was released from his Pittsburgh office on April 24.

Mr. Hallanan said rationing "has no justification at this time by logic, reasoning or fact". He called it "indicative of the lack of intelligent understanding which that government agency (OPA) has shown in dealing with a problem so vital to the people of this great arsenal of democracy."

"We have a Federal Petroleum Co-ordinator in Secretary Ickes," Mr. Hallanan's statement read, "who has shown an intelligent grasp of the critical problems of oil and gas supply and Mr. Henderson's decree was made obviously without any consultation or approval by the Petroleum Co-ordinator.

Says Ickes Not Consulted

"Secretary Ickes is the one who has intimate knowledge of every phase of the situation concerning the production, transportation and marketing of petroleum supplies and the announcement of Mr. Henderson as to the restriction of gasoline fuel was apparently made without any consultation with the agency of government charged directly with the responsibility of dealing with this critical problem or with any person of responsibility in the oil industry," the statement continued.

Scorns OPA 'Fiasco'

Mr. Hallanan said the OPA "fiasco" demonstrates the "fallacy of too many governmental agencies overlapping in their dealing with the same essential problem."

Secretary Ickes is the petroleum co-ordinator and his word should be the last in dealing with problems of gasoline or any other petroleum rationing, he added.

"It is inconceivable," Mr. Hallanan concluded, "that the Office of Price Administration, which has no responsibility for the production and distribution of oil and gasoline and which cannot possibly be possessed of the information and experience of the Petroleum Co-ordinator's Office, would have the authority to propose and effectuate such a drastic rationing program which, in the face of the facts, is wholly unnecessary."

Oil Chemist Hits D. J.'s 'Smearing' Jersey Standard

Special to NPN

MEMPHIS—Standard Oil Co. (N. J.) was strongly defended in its patent relations with the German I. G. Farbenindustrie and the administration, particularly Assistant Attorney General Arnold, was caustically criticized for its attack on the Jersey company for an alleged frustration of synthetic rubber development in the U. S. at the meeting here April 20-24 of the American Chemical Society.

The accuser was Dr. Benjamin T. Brooks, New York, consulting chemist and former Gulf Oil Corp. research head.

Departing from his prepared text, Dr. Brooks said:

Charges 'Smear'

"I hereby make this charge: "The Administration at Washington is trying to smear these companies (like Jersey Standard) not by court trials, but by means of newspaper headlines. They are using the war hysteria to smear these companies so the latter will not get credit for what they are doing to help win the war."

Strongly criticizing Assistant Attorney General Thurman Arnold and the Administration itself, Dr. Brooks, prominent in oil-chemical circles for the past 30 years, asserted that the patent system required companies, up to December, 1941, to not infringe on foreign-owned patents.

"An American company can accept our laws as they are and run the risk of being tried in the newspaper headlines, without redress for libel or slander, if the accusers happen to enjoy the immunity of government officers," the oil chemist declared.

Denies 'Company Interest'

"As to the present program," he added, "the record clearly shows that the government's synthetic rubber program has not been delayed a single day by any question of company interest.

"Mr. Arnold withdrew his charge that Standard had frustrated the development of synthetic rubber in the United States, but who can blame the press for headlining a sensational accusation by the Assistant Attorney General of the United States?"

Mr. Brooks' prepared paper, titled "Thirty Years of Petroleum Research", was one of more than a dozen presented at A.S.C.'s 103rd meeting here.

Jersey Writes Customers, Denying D. J. Charges

NPN News Bureau

NEW YORK—Printed letters to all "Esso" dealers' credit card holders have been sent out by Standard Oil Co. (N. J.), denying charges of alleged synthetic rubber frustration leveled against the company by Assistant Attorney General Arnold in his testimony before the Truman committee.

Signed by R. T. Haslam, general sales manager, the letter states, in part:

"Charges of an extremely serious nature have recently been leveled at the parent company of the Esso Marketers, the Standard Oil Company (N. J.), by witnesses appearing before the United States Senate Committee Investigating the National Defense Program (Truman Committee). By all the means at their command these witnesses have endeavored to convince both the Truman Committee and the public, through the press, that our national lack of synthetic rubber results from disloyal actions upon the part of the Standard Oil Company (N. J.)

"As one of our customers, you undoubtedly wish to know what we have to say about these charges. On our part, *we want you to know* what we have to say, for we are proud of the part we have played in the development of synthetic rubber for our country . . ."

Most of Jersey Standard's 8-page letter was taken from testimony of Jersey's President W. S. Farish when he appeared before the Truman committee (*NPN April* 1, *p.* 3; *April* 8, *p.* 7).

Hearing Set on North Carolina Grading

Special to NPN

RALEIGH — Lowered antiknock ratings of some gasolines, due to curtailed tetraethyl lead supplies and "robbing" motor fuels for aviation gasolines, may result in a change in North Carolina's gasoline grading regulations.

Acting on suggestions from the industry, the Gasoline & Oil Inspection Board has scheduled a hearing on gasoline grading for May 7, at 10 a.m. in the senate chamber at the state capitol here.

Present grading requirements are: Premium, 75-76 octane (A. S. T. M.); "regular," 68-69; and motor gasoline, 60-61 (the higher number applying to bulk plant tests). These grades were set in 1937. Station pumps must bear state grade. Last year, there was agitation for elimination of grading entirely. Legislation was enacted authorizing the state board, in its discretion, to change or eliminate grading requirements.

At the May 7 hearing, suggestion may be made that, for the duration of the war, at least, grading be eliminated.

Chicago 'Gas' Prices Cut By Indiana Standard

CHICAGO—Standard Oil Co. (Indiana) has reduced gasoline prices in Chicago, effective April 27. Red Crown (regular) prices were cut 0.7c to 10.9c for consumer t.w., and 8.9c to dealers. Blue Crown (third grade) dealer price was cut 0.1c to 8.4c. Prices are ex 4.5c taxes.

Virginia Oil Men's Group To Meet May 21, 22

Special to NPN

RICHMOND — Virginia Oil Men's Assn. will hold its spring meeting on May 21, 22 at John Marshall hotel, Richmond, according to announcement by Curtis R. Davis, association vice-president.

NPN Reports from WASHINGTON

News for ALL branches of the Oil Industry

WASHINGTON BUREAU, 803-805 National Press Bldg. ● Telephone National 3477 ● Staff: A. M. Petty, Warren W. Burns, O. H. Knight, James M. Collins

Gasoline Rationing

Big Question: What's Basic Quota?

WASHINGTON—Gasoline rationing goes into effect on the East Coast on May 15, with the big question unanswered as yet —what will be the basic quota?

Unofficial estimates, presumably emanating from somewhere within the Office of Price Administration, have placed the weekly allotment at from 2½ to 5 gal. for "non-essential" users, but these were discounted in other quarters.

Petroleum Co-ordinator Ickes expressed doubt at his April 23 press conference that it would be this low, while reliable sources within the OPA said flatly the allotment probably would not be definitely decided upon until just before rationing starts, perhaps not until May 14. There was another report that the monthly quota would be at least 25 gal.

Supply situation at time order goes into effect will determine the basic allotment.

Plan Is Temporary

The rationing system to be followed on the East Coast beginning May 15 is strictly temporary, uses cards, and will remain in operation until about July 1 when a "permanent" system—an elaborate plan using coupon books—will be instituted.

Under the temporary plan, cards will be issued to non-commercial users. Commercial vehicles—those that are clearly identifiable as commercial—will not have their gasoline consumption restricted during the May 15-July 1 period.

Enforcement of the interim plan depends entirely upon cooperation of the service station attendant and the good-will of the public. There is nothing to keep a service station operator from selling more than the prescribed allotment to a driver, nor is there anything to prevent him from selling gasoline to a person without a ration card.

Area Plan Covers

Temporary rationing is effective in Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, West Virginia, and District of Columbia.

Washington and Oregon were left out, but Mr. Ickes said rationing might just as well be extended to the Pacific Northwest, too.

Motorists will register on May 12, 13 and 14 to obtain cards under the temporary gasoline rationing plan which will be administered by the same local rationing boards handling sugar, tires and automobiles.

Tools of the temporary plan are the cards—5 in all—numbered A, B-1, B-2, B-3, and X.

Here Are The Cards

Average motorist will be given the A card merely by presenting his car registration certificate on R-day—time and places to be announced later—where the registrar will stamp the registration card so it cannot be presented a second time. The ration card will have the motorist's license number written on it.

The A card, resembling a meal ticket, will contain 7 squares, each representing a "unit" of gasoline.

The motorist may use up as much of the card as he wants at any one time, but when all 7 squares have been punched, he is not entitled to any more gasoline and probably will have to lay up his car until the coupon system starts on July 1. In other words, the A card must last from May 15 to July 1—or else.

The service station operator will punch, tear or mark the squares with an indelible pencil.

The B and X cards are supplementary. "B" cards will be issued to motorists who say in a formal application—not to be filled out by A card-ers—that their mileage falls within specified limits. B-1 contains 11 units; B-2, 15; and B-3, 19.

The X card will be issued to drivers whose mileage cannot be estimated definitely. As an example, OPA cited a doctor.

Non-Highway Use Exempt

Motorcycles will be given a smaller ration than cars. Small cars will be given as much gasoline as big ones. Non-highway consumption will not be restricted, but purchasers must sign a slip saying the gasoline is to be used for non-highway purposes. Non-commercial inboard motor boats will be given A cards, and commercial use must be shown before supplementary cards will be issued.

The temporary rationing plan was announced on April 22 by Price Administrator Henderson, who explained, for the benefit of the public, that rationing was made necessary—not by a scarcity of oil—but of a scarcity of transportation.

Nationwide Plan Not Needed Now

There is no prospect of nationwide rationing, Mr. Ickes told his press conference the following day, pointing out that it would be unnecessary in areas where there is plenty of gasoline. But there is a "very real prospect" of some East Coast service stations closing down because of rationing and curtailment, he said.

He disclosed that he had talked with Mr. Henderson twice by telephone, saying he approved the temporary plan, but he did not see the official announcement before it was made.

The temporary card system is not to be confused with the "permanent" coupon method which goes in effect on July 1. The former consists entirely of cards containing squares to be marked, punched or torn at time of purchase. The coupon system will be based on coupon books.

The coupons are to be torn out by the station attendant, and will be used to determine the supply of gasoline he will receive the following month.

'Permanent' Plan Discussed

Joel Dean, the man who directed development of the rationing plan as chief of OPA's fuel rationing section, told an audience of motor vehicle administrators from 11 eastern states in Rochester, N. Y., on April 24 that the coupon books would be good for the balance of the year.

The temporary plan, he said, was developed in conferences with oil company executives, automobile association officials, truck association executives, and others.

Two questions remain unanswered with respect to the coupon system. They are: Will the coupons be transferable? Will they be cumulative?

OPA, he said, believes they should be cumulative within a

NPN Increases Staff To Cover Washington

War-oil news continues to grow in volume—and importance. So, we have transferred A. M. Petty, NPN News Editor, to Washington "for the duration." This increases the Washington staff of NPN to four. Others are: Warren W. Burns, O. H. Knight and James M. Collins.

Mr. Petty has spent much time in Washington during the past year but it was decided that he should move down and make his headquarters there. For 5 years (1933-38) prior to coming to Cleveland, Mr. Petty was in charge of NPN's Washington Bureau. Readers will remember his interpretive coverage of the oil code period, and, later, the Madison oil trial.—Ed.

given period to permit business or pleasure trips, but is not sure about transferability of the coupons. If they are transferable, he said, the "doubling-up" requested of car owners would be facilitated, but there also is the danger of a "black market" developing.

OPA Prepares Lessons

Meanwhile, it was disclosed that OPA is preparing instructions to service stations which will cover practically every conceivable situation arising to perplex an operator. These instructions had not been completed at the end of the week of April 20, and were to be discussed by OPA representatives and advertising committee of Petroleum Industry War Council in New York on April 27.

Consideration also is being given to a "no gas land" between the rationed and un-rationed areas where cars from rationed states would not be allowed to buy gasoline.

This has not been definitely decided, according to official sources, but thought is being given to a 50-mile strip, and also to a "county-wide" strip which would vary in width from county to county.

OPA Sets May 18 to Freeze All Retail Gasoline Prices

(*Continued from page* 3)

East Coast states and District of Columbia were "frozen" at March 13 levels by Temporary Maximum Price Regulation No. 11. OPA now plans to cancel this and issue another order which will say that maximum retail prices at each individual station shall be no higher than that station's highest price during month of March, 1942.

Specialty products were not covered in Schedule 88, so, presumably, they will be covered under the blanket "freeze" from refinery to retail outlet.

To License Sellers

The blanket "freeze" provides that on May 11 no wholesale price shall be higher than the seller's highest price during March, and the same for retail outlets except that the "freeze" becomes effective on May 18.

On May 11, all wholesalers in the U. S. will be "automatically licensed"; retailers on May 18. Retailers of services will be licensed as of July 1. National registration of wholesalers and retailers will come later, along with issuance of some sort of certificate.

Whether or not bulk plants and service stations will be subject to the general licensing, or handled separately by OPA's oil unit, could not be learned up to a late hour April 28.

'Services' Included

Retailers of services—presumably including lubrication, car washing, tire repair and other services performed at stations—will come under the blanket maximum price order, effective July 1. As of that date, maximum price that can be charged for services can be no more than the highest price prevailing at the individual outlet during March, 1942.

Under the blanket "freeze" order, any new outlets—not open during March—must determine what were the highest prices in March for similar items at "competitive sellers" in the neghborhood. Whether such a provision will be included in the forthcoming order on oil prices, was not known yet.

Absorb 6% Rail Hike, OPA Tells Industry

WASHINGTON—The blanket price "freeze" for all products and commodities, except those covered by specific price schedules—such as crude and petroleum products—by allowing the wholesaler and retailer to charge his highest price during March as his maximum permits them to pick a price near end of the month which would cover the 6% railroad freight rate advance.

But, with oil prices not covered in the blanket "freeze", there is, apparently, no provision for passing on the freight rate increase. And same applies to other commodities covered in special price schedules of Office of Price Administration.

This was pointed out to Price Administrator Henderson by an NPN representative who asked if there was anything to be done for commodities covered whose prices were "frozen" during March and therefore could not reflect the freight increase.

Mr. Henderson referred the question to Dexter Keezer, head of OPA's consumer division, who said:

"That added cost would have to be absorbed along the line."

Full Text of OPA's Amendment Given Granting East Coast Price Advances

(Story on p. 3)

TITLE 32 NATIONAL DEFENSE
CHAPTER 11F
OFFICE OF
PRICE ADMINISTRATION

Part 1340—Fuel

Amendment No. 10 to Revised Price Schedule No. 88. *Petroleum and Petroleum Products.

A statement of the considerations involved in the issuance of this amendment is issued simultaneously herewith and has been filed with the Division of Federal Register.

Sections 1340.159 (C) (2) **Eastern Seaboard,** 1340.159 (C) (3) **Distillate Fuel Oils,** and 1340.159 (C) (6) **Residual Fuel Oils,** are amended to read as follows:

1340.159 **Appendix A:** Maximum Prices for Petroleum and Petroleum Products.

* * *

(C) Specific Prices.

* * *

(2) Gasoline.

(II) Maximum Prices for Gasoline on the Eastern Seaboard.

Eastern Seaboard: Maximum prices for gasoline in the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, West Virginia, the District of Columbia and the corporate limits of Bristol, Tennessee shall not be in excess of 1.2 cents per gallon above the maximum prices in the above states and the District of Columbia as determined under Section 1340.159 (B) (1)-(3). Such maximum increase of 1.2 cents per gallon shall apply to the communities in Maryland and Virginia adjacent to the District of Columbia in addition to the increase of .5 of a cent per gallon allowed for those communities below. Maximum prices for gasoline sold in the state of Florida east of the Apalachicola River and in the state of Georgia shall not be in excess of .9 of a cent per gallon above the maximum prices as determined under paragraphs (B) (1) to (B) (3), of this Section.

(3) Distillate Fuel Oils:

(I) The maximum prices in the states of Connecticut, Delaware, Florida, East of the Apalachicola River, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, West Virginia and in the District of Columbia for the Petroleum Products listed below shall not be more than the respective amounts per gallon indicated below in excess of the maximum price that would otherwise govern under Section 1340.159 (B) (1)-(3).

Product	Amount
Tractor fuel, gas house oils, distillate diesel fuel oils, Nos. 2, 3, and 4 fuel oils	.6 of a cent per gallon
Kerosine, range oil, No. 1 fuel oils	.4 of a cent per gallon

(II) Maximum Tank Wagon Prices for No. 2 Fuel Oil:

Tank Wagon Area:	Cents Per Gallon
Washington, D. C.	8.2

* * *

(6) Residual Fuel Oils:

(I) The maximum price in the states of Connecticut, Delaware, Florida, east of the Apalachicola River, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, West Virginia, and in the District of Columbia for residual fuel oils, comprising Nos. 5 and 6 fuel oils, bunker (C) navy grade, and residual diesel fuel oils, shall not be more than 45 cents per bbl. in excess of the maximum prices that would otherwise govern under Section 1340.159 (B) (1)-(3), except that at the points named in (II) below the prices there specified shall be the maximum prices.

(II) **Maximum prices for bunker C and No. 6 fuel oils on the East and Gulf Coasts in cargo and barge lots F.O.B. refineries and terminals (Ex-lighterage).**

Location of Refiners	Maximum Price Per Bbl.
Albany, N. Y.	2.00
New York, N. Y.	1.80
Philadelphia, Pa.	1.80
Baltimore, Md.	1.80
Norfolk, Va.	1.80
Portland, Me.	1.80
Boston, Mass.	1.80
Providence, R. I.	1.80
Charleston, S. C.	1.75
Savannah, Ga.	1.75
Jacksonville, Fla.	1.75
Tampa, Fla.	1.70
New Orleans, La.	.85

Maximum prices for ports on the Gulf and East Coast from Florida east of the Apalachicola River to the Canadian boundary not specified above shall be determined in accordance with (I) above. Customary differentials above the maximum prices for cargo in barge lots which were in effect on October 1, 1941 for deliveries other than in cargo and barge lots may be maintained.

1340.158 **Effective Dates of Amendments.**

* * *

(J) Amendment No. 10 S 1340.159 (C) (2), 1340.159 (C) (3), 1340.159 (C) (6) to Revised Price Schedule No. 88 shall become effective April 30, 1942.

(Pub. Law 421 77th Cong.)

Issued this 28th day of April, 1942.

.....

Leon Henderson,
Administrator.

Certified to be a true copy of the original.

(Signed) C. A. Bishop

.....

C. A. Bishop, Secretary.

*7 F.R. 1371.

Washington Personalities

From Geologist, to OPA, then OPC, is Path of J. Elmer Thomas

Oklahoma's flush production in 1914 did more than kick the price of crude from $1.05 down to 30c a barrel. For indirectly, it converted J. Elmer Thomas from a geologist to an economist, and started him on a varied career in the petroleum business, resulting in his appointment, 27 years later, as a special assistant to Deputy Petroleum Co-ordinator Ralph K. Davies.

"Within a week after my arrival in Tulsa," Mr. Thomas facetiously explains, "there was plenty of oil, too much in fact, so I decided to shelve my geological knowledge and take care of the oil on hand." Thus he became a petroleum economist. In passing, he also explains that the drop in price of crude to 30c a barrel was only 5c more than a pint of beer in pre-World War I days.

During World War I days, Mr. Thomas served in the photographic branch of the Signal Corps, later being commissioned as a 2nd lieutenant and giving instructions in the interpretation of airplane photographs. Becoming an expert in this line, he wrote a text book for the Army.

By birth, Mr. Thomas is an Ohioan. By adoption, he's a cosmopolitan as his oil industry work has taken him over the world. Toledo is his birthplace with Sept. 9, 1892 the date. In 1912, he was graduated from the University of Chicago with a Bachelor of Science degree and honors in geology.

During his sophomore days at college, Mr. Thomas worked as a temporary field assistant in the U. S. Geological Survey, thus getting his first contact with the Department of Interior in 1911.

Upon being graduated, his first job was with the Guffey-Gillespie Oil Co. as a field geologist. This was in the boom days of the famous Cushing Field.

His second job was with the Empire Gas & Fuel Co. "No first class geologist ever failed to do at least a month's work with the Empire," Mr. Thomas explains.

Among other positions held by Mr. Thomas are: Consulting geologist; chief geologist of Shaffer Oil & Refining Co.; petroleum analyst, Fenner & Beane; vice-president of Bavarian Oil & Gas Co., New York and Munich, 1930-33; and independent oil operator and consulting petroleum economist, 1933-40.

On June 24, 1941, he came to Washington to work with the Office of Price Administration, "and after doing 90 days"—as he explains it—joined the Office of Petroleum Co-ordinator as special assistant to Mr. Davies, the job he now holds.

Does His Traveling by Air

Flying all over the U. S. is nothing unusual for this pipe-smoking assistant. In Washington, he spends more time at the office than away from it. In fact he so seldom has time to read newspapers that he keeps a kodak-radio on his desk to get the news broadcasts, particularly late at night.

During early days of the NIRA oil code, Mr. Thomas was a member of the Petroleum Administrative Board and special technical adviser to Oil Administrator Ickes. In June 1937, he was official delegate for the U. S. government to the Second World Oil Congress, held in Paris, and in the following month went to Moscow as official delegate of the American Assn. of Petroleum Geologists to the 17th International Geological Congress.

In Europe, Mr. Thomas studied the oil resources of Germany, Italy, Austria and Czechoslovakia. Commenting on Germany's wartime oil supplies, he said that the Nazis have pushed their fields to the utmost, and in many cases unwisely from a sustained production standpoint. Germany is getting most of its oil supply from synthetic processes and from Roumania, he added.

Was First President of A.A.P.G.

Mr. Thomas was the first president of the American Assn. of Petroleum Geologists and this past week received a wire from A.A.P.G.'s newest president, F. L. Aurin, president of Southland Royalties Co., who sent congratulations on Mr. Thomas' "silver anniversary" as A.A.P.G.'s first president. A.A.P.G. also dedicated its 27th annual convention program to Mr. Thomas and three other early association officers.

Other offices formerly held by Mr. Thomas include the chairmanship of the Economic Division of the Petroleum Section, American Institute of Mining & Metallurgical Engineers, and chairman of the Volunteer Committee on Petroleum Economics for the Federal Oil Conservation Board, March 1930.

At OPC, Mr. Thomas' duties vary from day-to-day. Sometimes it's a problem in marketing, production, refining, transportation, conservation, or a combination of any or all of them. Special Assistant Thomas likens his work with Mr. Davies to the private who told his general "what pleases you is going to tickle me to death".

By actual count, Mr. Thomas is the author of 25 articles on various phases of the oil industry. Titles range from "The Origins of Proration" to "The Market Price of Oil Securities".

Having spent most of his life out-of-doors, Mr. Thomas says he likes "to remain quietly in the city" when on a vacation. But confined work and long hours at OPC may cause him to bend an ear to "the call of the wild" if and when he takes a vacation this year.

*In these surroundings, **J. Elmer Thomas**, special assistant to Deputy Petroleum Co-ordinator Davies, "carries on". Reading oil charts is second nature to Mr. Thomas, shown here with two*

OPC Recommendation Bans Contracts on Heating Oil

WASHINGTON — Contracts to supply fuel oils for space and central heating and for hot water heaters are banned throughout the U. S. on June 1 in Office of Petroleum Co-ordinator's Recommendation No. 39. Exception is made for cases where such contracts or commitments are required by federal or state law.

OPC's action came on April 13, but the formal recommendation, delayed by revision before issuance, was not announced until April 23. It was the result of a recommendation of the Petroleum Industry War Council.

All grades of fuel oil—including Nos. 1, 2, 3, 4, 5 and 6 and Bunker "C", kerosine, range oil and gas oils, "and any other liquid petroleum product used for the same purposes" — are covered in the recommendation.

Fuel oil used for cooking or lighting, however, is exempt. Also, the order specifically exempts liquefied petroleum gases. Contracts covering deliveries of fuel oils for exempt uses must contain this statement:

"Fuel oil delivered pursuant to this agreement will not be used for space or central heating, or for hot water supply."

Step Toward Rationing?

Some oil men view the cancellation of contracts as a step in the direction of fuel oil rationing. They point out that a real headache in any fuel oil rationing program would be removed by the elimination of contracts or commitments. Resentment on the part of consumers who held agreements with oil companies for an assured supply of fuel oil might be a difficult problem for the oil company forced to sharply curtail its deliveries.

If the move is designed to "clear the decks" for fuel oil rationing, it means OPC expects next winter to be a difficult one against which all safeguards should be taken, some oil men believe.

Following is complete text of Recommendation No. 39 as released by OPC:

TITLE 32—NATIONAL DEFENSE
CHAPTER XIII—OFFICE OF PETROLEUM COORDINATOR FOR NATIONAL DEFENSE

[Recommendation No. 37]
PART 1507—DISTRIBUTION
To all suppliers of petroleum or petroleum products:

Because of shortages of transportation facilities available to move supplies of petroleum and petroleum products to various areas where they are needed, and because of increased and changing demands for petroleum and petroleum products of the proper kinds, at the proper places, and at the times when needed, it is imperative for the successful prosecution of the war effort that contractual commitments shall not interfere with the requirement that all supplies of petroleum and petroleum products available be so distributed from time to time as to meet essential requirements. While this is presently true both as a matter of general law, and by reason of force majeure, clauses governing such commitments, nevertheless, in order to avoid misunderstandings on the part of suppliers or consumers, and in order to avoid delay arising out of unnecessary disputes, commitments for the future delivery of certain petroleum products should be avoided.

THEREFORE, pursuant to the President's letter of May 28, 1941, establishing the Office of Petroleum Coordinator for National Defense, I do hereby recommend that immediately and until further notice:

§1507.13 **Definition.** "Fuel Oil" means any Fuel Oil classified as grades Nos. 1, 2, 3, 4, 5, or 6, including Bunker "C" Fuel Oil, kerosene, range oil, and gas oils, and any other liquid petroleum product used for the same purposes but shall not include Fuel Oil when used for cooking or lighting nor liquefied petroleum gases.*

§§1507.13 to 1507.15, inclusive, issued under the authority contained in the President's letter of May 28, 1941, to the Secretary of the Interior (6 F.R. 2760).

§1507.14 **Commitments to Furnish Fuel Oil to Consumers.** No person, natural or artificial, shall make, extend, or permit to be extended, any agreement, contract, or other commitment to furnish Fuel Oil on or after June 1, 1942, to meet the future requirements of any other person, natural or artificial, for ultimate use of Fuel Oil for space or central heating, or for hot water supply, but this provision shall not apply in any case where any such agreement, contract, or other commitment is required by Federal or State law. Any existing agreement, contract, or other commitment contrary hereto shall be cancelled.*

§1507.15 **Statement of Use.** Any contract, agreement, or other commitment for the delivery of fuel oil not prohibited by §1507.14 of this chapter shall contain the following statement by the ultimate user of the Fuel Oil covered thereby:

"Fuel Oil delivered pursuant to this agreement will not be used for space or central heating, or for hot water supply.

Legal Name of Person
By:

Signature of Duly Constituted Representative."

Such statement shall constitute a representation to the Petroleum Coordinator for National Defense and to the person supplying such Fuel Oil, and such person shall be entitled to rely upon such representation unless he knows or has reason to believe it to be false.*

(Sgd) R. K. Davies
Deputy Petroleum Coordinator
for National Defense.

April 20, 1942.

OPA Permits New Tire, Tube Price Hike

A sixteen percent mark-up in the retail price of new passenger car tires and tubes has been permitted by Office of Price Administration.

April 25 was the effective date of the increase, permitted by OPA to overcome the cost of operating under the Tire Return Plan which was designed to block "bootlegging" and help tire retailers and jobbers to slip from under the burden of large tire inventories.

Manufacturers and mass distributors are allowed to increase their prices by the dollar-amount of the 16% retail increase. The same increases apply to private brand tires.

The higher price was approved by Amendment No. 1 to Price Schedule 63.

Here's the Reason

Reason was this: Retailer sells back his tires at cost plus 10%. Manufacturer sells to Defense Supplies Corp., which pays freight to the manufacturer's warehouse. The manufacturer buys the tires back from DSC, which must charge a price to compensate the government. Therefore, OPA decided a higher price for new passenger tires and tubes was justified.

Price increase does not apply to truck tires, because they are not part of the tire return plan.

OPA Hikes Recap Quotas For Passenger Cars

A total of about 3,500,000 new and recapped tires have been made available for rationing in January, February, March, April and May.

Office of Price Administration announced on April 24 that the May quota would be larger than the April allotment, paring the number of new tires but increasing the number of recaps.

For the first time since rationing began, List A passenger car eligibles will have access to recaps. Heretofore, only List A trucks and List B passenger cars could get recaps.

Box score of quotas to date:

	New Tires		Recaps	
	Cars	Trucks	Cars	Trucks
Jan.	114,191	242,783	.....	.....
Feb.	80,784	156,029	.....	88,505
Mar.	104,701	256,385	.....	110,225
Apr.	101,636	275,523	470,317	246,442
May	55,573	238,259	578,092	379,060
Total	456,885	1,168,979	1,048,409	824,232

OPC Halts Switch Of Split Stations To 100% Accounts

WASHINGTON — To protect the small refiner, "split account" service stations may not be changed to exclusive or "100%" accounts on and after April 20, Office of Petroleum Co-ordinator says in Recommendation 46. This was signed April 20 by Deputy Petroleum Co-ordinator Davies after approval April 14 by Assistant Attorney General Arnold.

However, if compliance with this recommendation "would work an exceptional and unreasonable hardship" upon a service station, the owner may apply to OPC for relief. Owners should contact the Director of Refining in their own district, OPC says.

"There is a tendency toward the expansion of so-called exclusive-dealing arrangements with the result that the retail outlets for gasoline, lubricating oils and other petroleum products manufactured by smaller refiners are removed," OPC said in issuing the recommendation.

L.P.G. Equipment Chief Appointed by WPB

WASHINGTON — Appointment of John F. Steele, Pelham, N. Y., as chief of the liquefied petroleum gas section, was announced by War Production Board April 22.

Mr. Steele's duties will include handling all matters for WPB pertaining to manufacture of equipment for the distribution of liquefied petroleum gas. Previous to coming to Washington, Mr. Steele was connected with Tide Water Associated Oil Co. of New York in the marketing and statistical divisions. He has also held posts with OPACS (now OPA) and OPM (now WPB).

400,000 New Cars on Hand For Rationing, OPA Says

About 400,000 new cars, available for rationing this year, are in manufacturers', dealers' and distributors' hands, reports to Office of Price Administration show.

This is in addition to 140,000 cars in the government pool for military and rationing needs during 1942.

Up to March 31, about 41,000 cars had been released under rationing certificates, OPA said.

Gillette Committee Swings into Hearings On Possibilities of Farm Alcohol-Rubber

WASHINGTON—Synthetic rubber from agricultural alcohol—made under a Polish refugee's patent, more quickly and cheaply than rubber from petroleum, and tested in pilot plant located "somewhere in the U. S."—backed by a high-ranking government official.

That is the romantic picture being painted to a special senate committee investigating industrial uses for farm products, especially alcohol from agricultural crops.

Indications are that the government official backing this rubber-from-alcohol project is Leon Henderson, Office of Price Administration chief.

Officials of the Rubber Reserve Corp. (RFC subsidiary) are scheduled to give their view on the project on April 28.

Three from OPC Testify

Three representatives of the Office of Petroleum Co-ordinator appeared before the committee April 24 and gave their views.

They were: Ralph K. Davies, deputy co-ordinator; Robert E. Allen, assistant deputy co-ordinator; and Wright W. Gary, OPC refining director.

Butadiene, the raw material for synthetic rubber, can be made from alcohol, said Mr. Gary, although admitting that he had only a cursory knowledge of the alcohol-butadiene process.

Rubber Reserve Corp., the RFC subsidiary sponsoring the government's synthetic rubber program, has decided that this war-essential product should be made from petroleum, Mr. Gary said. And the oil industry is ready and willing to do the job, he added.

Attitude of Mr. Gary and Mr. Davies was:

If there is some quicker way of making synthetic rubber than from petroleum, some process requiring less amounts of critical materials, which will produce this product in volume and quality required, then it should be thoroughly explored.

Mr. Davies expressed doubts that the present synthetic program could be completed, as planned, by end of 1943 because of delays in getting materials for building the necessary plants.

Hear 'Alky-Gas' Men

The special committee is headed by Sen. Gillette, Iowa, who in the past has sponsored legislation for compulsory blending of alcohol with gasoline.

Other members of the committee are: Senators Wheeler, Montana; Norris, Nebraska; Thomas, Oklahoma; and McNary, Oregon.

Committee counsel is Paul E. Hadlick, Washington, D. C., who will serve part-time while continuing as secretary of the National Oil Marketers Assn.

Gathering background for the hearings, the Gillette committee held a series of secret sessions at which testimony was heard from several outstanding advocates of power alcohol (alky-gas). They included Dr. Leo. M. Christensen, University of Nebraska; Dr. Wm. J. Hale, Washington, president of the National Agrol Corp.

Pilot Plant Operating

Also appearing at the secret sessions were Leon Henderson and a Dr. Rosten, unidentified but believed to be the Polish inventor of the alcohol-rubber process.

Picture as outlined by Committee Counsel Hadlick, from record of the previous hearings, was that alcohol from potatoes had been turned into butadiene in Poland and Russia, that the process had been brought to the U. S. and a pilot plant constructed.

From this pilot plant, it has been determined that 100,000-ton capacity for synthetic rubber could be built for $20,000,000, or $140,000,000 for 700,000 tons, within 4 to 6 months, Mr. Hadlick said. He compared

OPC Officials Discuss Synthetic Rubber Processes at Gillette Hearing

Listening to Paul E. Hadlick, Senate Agricultural Subcommittee counsel, explain a point prior to asking a question, are (left to right on opposite side of table) Deputy Petroleum Co-ordinator Davies, Assistant Deputy Robert E. Allen, and OPC's Refining Director Wright W. Gary. Mr. Hadlick is shown gesturing with his hands. Sen. Gillette, committee chairman, is at head of the table, left

this with $650,000,000 allocated for petroleum-rubber plants.

Cost Figure Explained

Mr. Gary pointed out that the $650,000,000 figure was on a basis of all new plants, when as a matter of fact effort was being made to utilize all existing equipment possible. Also, about 25% of this figure represents equipment for polymerizing the butadiene into synthetic rubber. Mr. Hadlick said that the alcohol-rubber cost figure did not include polymerization.

Alcohol Costs Vary

It would require 525,000,000 gal. of alcohol to make 700,000 tons of synthetic rubber, according to Sen. Gillette.

Testimony as to alcohol costs varied. One industrial alcohol company estimated a cost of 45c per gal. but University of Nebraska and University of Iowa "experts" put it at 20c with sale of by-products, and even down to 10c if Leoti Red sorghum was used, Mr. Hadlick said.

To make 100,000 tons of synthetic rubber annually from petroleum, according to OPC Refining Director Gary, it requires 25,000 bbls. daily production of crude. However, other products also would be made from the same oil.

Questioned on Production

Deputy Co-ordinator Allen was asked how much crude production was required to meet military needs. He replied: 2,600,000 bbls. daily. But from this total would come some products going into civilian consumption channels, he added. Present crude output is about 3,600,000 bbls., down considerably from production earlier this year because of disrupted transportation facilities, he explained.

Purpose of these questions, apparently, was to lay the groundwork for a statement later that it would be more advisable to make synthetic rubber from replaceable farm products instead of using irreplaceable petroleum resources, especially with military requirements of oil so great.

Henderson's 'Brainchild'?

Committee Counsel Hadlick said that, with the exception of one government official, the Polish patent for making butadiene from alcohol apparently had gone unnoticed by agencies concerned with the rubber shortage. He said that this government official, whom he did not name, had appeared before the Gillette committee and "seemed to understand the process and favor it."

Knowing that Leon Henderson had appeared before the Gillette committee the day before, Mr. Hadlick's remarks were interpreted by some as meaning the OPA chief was interested in the alcohol-rubber project.

Asked About 'Alky-Gas'

"Alky-gas" (alcohol-gasoline blends) was brought into the discussion near close of Mr. Gary's testimony.

Mr. Hadlick cited testimony that 1% of alcohol would raise the anti-knock quality of one octane number and asked Mr. Gary if there was anything to this which would help the war effort.

The OPC refining director pointed out that Army and Navy specifications do not allow alcohols, "primarily from an experience standpoint." He said that he had heard estimates that 1% would raise the anti-knock 0.7 of an octane number, but only at the lower octane levels, 50 to 55, he added.

There is no likelihood, Mr. Gary continued, of a shortage of tetraethyl lead for military purposes, especially now with civilian consumption of motor fuel falling off.

Rubber Reserve to Explain

Three officials of the Rubber Reserve Corp. are to testify April 28. They are Howard J. Klossner, president; Stanley T. Crossland, assistant to Mr. Klossner; and Dr. E. R. Weidlein.

This rubber policy-making agency, controlled by Jesse Jones as RFC chief, has been much in the limelight in other investigations seeking answer to the question: "Why haven't we more rubber on hand?"

Gillette committee can be expected to ask if Rubber Reserve ever heard of alcohol-rubber and if not, why not.

To Aid Peru Rubber Output

A fund of $1,125,000 has been set aside by Rubber Reserve Company for the Government of Peru's use for the purpose of increasing wild rubber production, Jesse Jones, Secretary of Commerce, announced April 23.

Use of Asphalt For District 1 Limited by OPC

WASHINGTON—Demand for tank cars to supply East Coast with crude for fuel oils underlay Office of Petroleum Co-ordinator's Recommendation No. 45 which prohibited for the duration all non-essential use of asphalt and asphaltic products on District 1 streets and highways, except as approved by Public Roads Administration.

Recommendation, signed by Co-ordinator Ickes on April 24 was announced on April 28 by Deputy Co-ordinator Ralph K. Davies who said it was "prompted by the necessity of diverting railroad tank cars normally used to haul asphalt and tar to the seaboard to the more important job of bringing in crude petroleum for the production of fuel oils to meet war demands.

This prohibition includes purchase, sale, delivery or withdrawal from storage of any asphaltic products, including road oils or any tar product.

Order Tank Truck Use

Whenever asphalt and its products are transported, tank trucks should be used "in all movements of 200 miles or less except where suitable tank truck transportation cannot be obtained", recommendation says.

Use of these products may be continued, recommendation says for 15 days following effective date, presumably April 24.

Recommendation was addressed to all federal, state and local road building and repair agencies in the district, who, Mr. Davies said, could reduce asphalt consumption by about 3,500,000 bbls. annually if they co-operate 100% with the request.

(This recommendation was approved by Assistant Attorney General Arnold and will be printed in full in Oil-*LAW*-Gram —Ed).

LPG Rule Clarified

Liquefied petroleum gas equipment that was used before April 1, 1942, and then withdrawn from use is exempt from provisions of Limitation Order L-86 only if the equipment was withdrawn after April 1, 1942.

The order exempted equipment "installed and in actual use prior to April 1, 1942 . . . subsequently withdrawn from such use." Interpretation No. 1 of the order, issued April 27, made it clear that equipment must have been withdrawn from service after April 1 to be exempt.

Natural Gas Restrictions Extended to New Areas

Restrictions on delivery of natural and mixed natural and manufactured gas to consumers have been extended to parts of Iowa, Kansas, Minnesota, Nebraska, Oklahoma and South Dakota, War Production Board announced April 24.

After May 15, WPB said, the above products may not be delivered to new users in those areas nor may deliveries to existing non-residential consumers be increased unless such consumer installs standby facilities to replace the new or additional delivery during a period of shutoff, or unless such delivery is approved by the WPB.

Trade-In Batteries Required by Order

A jobber's inventory of replacement storage batteries for automobiles and light trucks may not exceed a 45-days supply and after April 30 no filling station or other retailer may sell a new automobile replacement battery without accepting an old one in exchange.

These provisions were incorporated in Supplementary Limitation Order L-4-b, issued by War Production Board April 25.

The 45-days limit on jobbers' inventories is to be composed of the number of batteries sold during the corresponding month of 1941, plus one-half of the number sold in the succeeding month of 1941.

Sizes, Models Drop

Production of batteries were prohibited by the order except in minimum specified ampere hour capacities, a requirement that will reduce the number of sizes and models from 75 to 15.

From April to September 30, a manufacturer is limited to 75% of his output during the same period of 1941. This provision superseded Amendment 1 to Limitation Order L-4-a which provided that during the first 6 months of this year battery manufacturers could make 150% as many batteries as during the same period last year.

The EDITOR'S Page

Readers comments and opinions will be much appreciated by—WARREN C. PLATT, NPN's Editor and publisher, Penton Building, Cleveland, O.

OPA Makes Oil Donate $1,000,000 a Day Toward Inflation

A FINE example of the arbitrary, ignorant and costly ways of government bureaucracy is being given by the Office of Price Administration in its "handling" of oil industry prices.

The example can wind up by wrecking a lot of oil companies, destroying much competition in the oil industry, and keeping the residents of the East Coast from getting the oil and gasoline which they otherwise might have. The example of OPA bureaucratic methods may also succeed in closing down munition plants in the North and East and thus give aid and comfort to the enemy.

This is no exaggeration of the OPA oil price policy nor of the possible results.

The irony of it all is that the oil industry entered upon this war with a vast supply of petroleum and its products, plenty of refining capacity, more than enough transportation of all kinds, and sufficient capital to run on even though the industry as a whole may not have fully recovered from the sad days of East Texas and government mishandling then.

Now its shortages and other troubles are due to acts of government, even more than to acts of war.

The East Coast "shortage", and all that goes with it, is primarily the result of insufficient protection by the U. S. Navy. Maybe the Navy cannot help it but maybe, on the other hand, it should have done a better job of protecting the East Coast and the oil tankers from submarines. At all events the "shortage" is not the fault of the oil industry.

The "shortage", as ordered by the government, is greatly increasing the oil industry's operating costs. The proposed card rationing will increase those costs still more.

The decrease in gallonage for every one because of the rubber "shortage" is the result of an act, or lack of an act, of government. This decrease also is increasing costs of every oil company.

To offset this "shortage", the oil companies, their tankers sunk, diverted to Navy purposes, or otherwise tied up in port at government direction, are doing a marvelous job of rushing increasing volumes of petroleum to the East Coast but at great expense: by an unprecedented use of tank cars, by rehabilitating old pipe lines, by building new ones and reversing others regardless of how such reversals disrupt business.

At the same time, refineries are changing their operating schedules, likewise regardless of cost, so as to make high-octane aviation gasoline, toluol and other war products, and are launching on a big program of making butadiene for synthetic rubber.

What the total of all this amounts to in extra cost to the companies no one has yet estimated, but a conservative estimate has been made of just the extra cost of this tank car movement to the East Coast of a million dollars a day—that is extra cost or loss to the participating oil companies.

Against this extra cost the industry has been allowed a skimpy increase in price or two. One increase made last fall was to "recompense" the companies for their extra costs of tank car movement last summer during a "shortage" induced by inaccurate government figuring.

This extra cost burden falls chiefly on the major companies. They are big and have money. But finally, even the Federal Treasury runs out of cash, as we have had many evidences of late. The treasuries of the major oil companies cannot stand the drain forever. In fact, one now hears talk of the approaching need of borrowing money for day-to-day working capital.

The major companies have been prevailed upon to form a gigantic pool into which they will pay any increase in prices granted by the government to compensate for these increased transportation costs and from which they expect to draw down checks for those costs. This pool, however, is to handle only the extra transportation costs and not the increased costs due to the rubber shortage, government rationing, higher labor costs, etc. A fair guess might be that by the time these major oil companies get themselves extricated from this pool, even though it has been "blessed" by the administration, they are more likely to find themselves not only short financially from the deal but facing a court in a second "Madison".

To date, these costs are mounting with no certain prospect that the administration through its OPA is going to allow sufficient price advances to cover them.

"Cost Pool" Threatens Independent Competition

IN THE meantime, the whole maneuver, including the "cost pool", is making the plight of the small oil man, the competition of which the New Deal likes to talk so much, all the more impossible. The small oil man cannot well sit in on this cost pool because he hasn't the money and there isn't much of an operating place for him. However, the more gigantic the pool grows, the greater the costs of tank car and other more expensive means of transportation become, the more dependent the small man is on the major oil company.

The East Coast jobber today is being shoved by government into the arms of the major oil companies, whether majors want him or not, and regardless of his own wishes in the matter.

Also, the greater the size of the pool's joint costs, and the less tanker protection, the more the Gulf Coast Independent refiners are shut out of their old market and the more likely they are to dry up.

This growing threat to destroy competition, due to acts of government, is taking place as the head of the so-called trust-busting division of the Department of Justice sits on various witness chairs and tells gullible members of Congress that without competition the war cannot be won etc. etc. etc. etc.

OPA's Oil Policy Increases Danger of Inflation

JUST to make the story still more ridiculous, the head and members of OPA make speeches about how they must "stop inflation" and they even have the effrontery to say that to meetings of oil men as a reason for doing nothing about protecting the industry's advancing costs.

Yet, by their own New Deal theory of "stopping inflation", of "sopping up excess buying power", they are releasing oil industry money to the general public to do this very "inflationary" buying that the OPAers fear. The OPA is actually putting oil industry capital out on loan to the general public to create a still greater buying power; and this when OPA knows that, because of the rubber shortage (government inflicted), the public would not buy more gasoline and oil if it could. Even the cheekiest labor "leader" would hardly have the gall or the stupidity to ask increased wages because of an increase of a few cents in the price of a commodity that each union man should use for only his absolutely necessary war requirements for a commodity of which he is using less every day—gasoline. Here is certainly one place where higher prices would help defeat inflation.

Another place where higher prices would materially aid to carry out the administration's "anti-inflation" program

would be in regard to fuel oils, heavy and light. The administration says it wants every one on the East Coast who can to convert to coal and it has issued orders to forbid new installations and even to cancel existing contracts. It has also ordered no more new oil installations elsewhere in the country. However, the administration carefully refrains from applying the greatest deterrent of all—that of higher price—even though the higher price has long since been well justified by the higher costs of the oil companies.

The administration says that it must hold down prices because of the few articles there are left for the public to spend its new surplus cash for, and for which articles no substitutes can be provided to help sop up this cash. Yet here with an abundance of substitute for oil—coal—the New Deal and its OPA refuses to use the most effective weapon of all and doubles back on its own argument thereby,—a higher price for fuel oil which would cease to make it competitive with coal.

The Office of Price Administration is maintaining its utter disregard of oil industry difficulties, just as its grand chief in the White House is calling for business taxes that will take all profits over 6% on some undefined "investment". One may wonder if the "tax plan" for oil may not be to take all the "excess profits", then all the "6%" and inflict a serious loss to boot?

Blocks Man's Ingenuity with Cumbersome Monstrosity

IN addition to all these government-made handicaps, the oil industry's individual ingenuity is blocked. By this big government set-up the industry is forced to meet the "shortages" as a unit solely through committees and government departments. The individual, unless he is filthily heeled with cash, cannot step out and try any smart ideas of his own, of fixing up some old trucks or barges, of day and night operations, of getting together with some small refiner and between them get a petroleum product where it is most needed at low cost, BUT at a higher price.

All the individual oil man can do is to turn any bright ideas over to a committee; have them passed on, perhaps, to other committees; then perhaps "formalized" into a report which may be submitted to a government agency for possible future action.

Whatever the size of the East Coast shortage may actually be, the government decrees that it must be met on a gigantic scale, despite all the cumbersomeness of great size and the practical difficulties from administering voluminous detail.

Government is also marking out this economic monstrosity exactly, to the very inch, by county lines. The monstrosity ends just here, on this surveyor's line, and no other place. In order to have higher prices those on the "other side" of this line are requested, as individuals, to bring in the most detailed cost figures from their books. They are told they must do this as individuals and not through their associations, and that the "relief", if any, will be given individually. This at once not only gets into tremendous detail but into the competitive efficiency of various companies.

Whose efficiency will the OPA accept as standard?

Will OPA take this opportunity to indulge in a little social reforming by fixing prices that will eliminate the least efficient at once?

If the low cost standard OPA selects favors the majors will OPA order the Independents out of business?

Of if that standard should favor the Independents, would OPA require the majors to continue to dissipate their stockholders' money?

There is no question but that OPA is building up the greatest government machine in all history, a machine that will exercise the right of life or death over all business; that can and will say who shall live and who shall die.

And this is a machine of which industry, including the oil industry, knows little.

Just exactly who constitutes this machine?

Who are the individuals in it?

How do they operate?

Congress should Overhaul OPA's Mysteries

ALL the oil industry knows is that there are a number of ex-oil men, economists and administrative men from different oil companies, who have something to do with the price procedure.

The oil industry knows, but not by official announcement, that there are three or four of the college professorial type of economists or experts. The industry also knows, but not by official statement, that there is a "legal" department which, in its study of proposed price orders, goes far beyond determining their proper legal phraseology and passes on the detailed merits of the proposed orders and exercises its own independent judgment as to whether they are "proper".

The oil industry also knows, but not by official statement, that so far as it is concerned this "legal department" has consisted of one man with no expert knowledge of oil and of an anti-business complex, who, report says, lectures his associates at great length about the evils of big business while they are supposed to be considering an oil price order.

And from this greatly growing machine of unknown characteristics and undisclosed methods, comes whispered advice to the oil man, large and small, to bring his story in himself and not through his association, and also to keep away from OPC, if he wishes consideration.

What is the small oil man to do if he does not use his association and what is OPC for if not to be an advocate of the oil industry in the solution of its governmental problems?

It would seem that it is just about time for a thorough overhauling of this machine of government, OPA, and while at it there might also be included WPB and what is its set-up for passing on oil problems. This overhauling could well be done by Congressman Cole's committee which has obtained such a detailed knowledge of the oil industry over the last six or seven years. Heaven forbid that some of these other congressional committees that show such a high degree of political dishonesty and business ignorance should move in on the job.

Give East Coast Oil— Not More Power to OPA

CO-OPERATION with oil industry facilities and supplies is undoubtedly necessary to contend with such a large problem as the East Coast shortage and the war requirements of government.

But would it not be more in line with American principles and American business experience if individual companies were left free to act on their own and to name their own competitive prices, where they thought they could do their share of the job?

Would not our East Coast stand a better chance of getting its necessary supplies if the companies were allowed to work out their own plans as they saw fit, and to pass on to the consumer the increased costs as they found them?

The reduction in each company's volume of business due to the government-inflicted rubber shortage together with the increased wages and other expenses due to war are daily raising oil company costs, but raising them differently for different companies.

How can any government agency intelligently pass on the individual company merits of such costs that change almost daily in order to authorize price advances, if it would?

Why throw into an accounting Frankenstein the problems of pooling major company increased transportation costs and collecting any increase in prices granted by government for that purpose, when business history shows that the more decentralized and individual prices are the lowest they will be to the ultimate consumer?

But anyway, first and last, why should the OPA double back on its own "anti-inflation" argument and force the oil companies to finance, seemingly indefinitely, loans to the consumers of the East Coast at the rate of almost $1,000,000 a day with which any extra cash, according to OPA, the consumers are busily searching the markets to buy scarce articles by running up the prices if necessary?

In short, why should this administration, seemingly so solicitous of the public's pocketbook, force the oil industry to finance $1,000,000 a day of inflation?

Ickes Takes Sound Position with States

PETROLEUM Co-ordinator Ickes' war efforts with the oil industry are getting somewhere, and now quite rapidly, because at last his thinking is sound and practical.

To the National Conference of Petroleum Regulatory Authorities—the conservation officers of oil states—the Co-ordinator last week:

(1) Disavowed any desire or intent as a federal authority to "take over" the oil industry;

(2) Expressed preference for and belief in the fundamental policy that the states should conserve their own natural resources, with whatever help they might need from the national government;

(3) Hoped that the oil states will be so successful in thus discharging THEIR duties during the war that there will be no question of each state continuing its work after the war.

(4) That the oil industry, itself, should do as much as it possibly can by itself to supply the war needs of the country.

If the petroleum Co-ordinator will continue to stand on this platform the oil industry can go along with him and do a most excellent job for the country's good. If Co-ordinator Ickes, in these words, also speaks for President Roosevelt and the New Deal, that makes it all the better.

As to whether Ickes speaks for Roosevelt, he does not say and we do not know. Some of the Rooseveltian actions, through his Department of Justice, would seem to indicate that Ickes does not speak for the Administration.

What makes Co-ordinator Ickes present position so sound is that, entirely aside from any alleged federal legal "rights", the basic fact is that from an administrative standpoint it would be impossible for a bureaucracy at Washington, even operating through sub-bureaucracies in each oil state, properly to handle all the many minute and complex problems of oil conservation.

There has been plenty of evidence the past year that a Washington bu-

NPN's Washington Directory of Oil Agency Headquarters

Following is a partial list and directory of governmental agencies in Washington dealing with matters affecting the oil industry: (List is as accurate as possible but is only tentative as room and phone numbers are constantly changing.)
Abbreviations code: Rm for room; Ex for phone extension.

Office of Petroleum Coordinator

Interior Department (New Building) 18th and C. Sts., N. W., Phone REpublic 1820.

Co-ordinator
Harold L. Ickes, Rm 6153, Ex 5000.

Deputy Co-ordinator
Ralph K. Davies, Rm 6654, Ex 3831.

Assistant Deputy Co-ordinator
Robert E. Allen, Rm 6647, Ex 3334.

Co-ordinator's Staff
6th and 7th Floors, New Interior Bldg.

Special Assistants
George W. Holland, Rm 6623, Ex 4897.
Gordon M. Sessions, Rm 7519, Ex 2621.
J. Elmer Thomas, Rm 7442, Ex 4735.
Howard T. Mather, Rm 6628, Ex 4626.
H. A. Gilbert, Rm 6629, Ex 4418.

Production Division
Donald R. Knowlton, Rm 7410, Ex 4861.
Paul M. Raigorodsky, assistant director, Rm 7425, Ex 4774-2059.
Ralph J. Schilthuis, assistant director, Rm 7416, Ex 2907-4689.

Refining Division
Wright W. Gary, director, Rm 6637, Ex 3233-4644.
Robert B. Cragin, assistant director, Rm 3224, Ex 3237.
Phillip M. Robinson, assistant director, Rm 6644, Ex 4786-87.
Max B. Miller, chief equipment procurement section, Rm 3548, Ex 4560.
C. R. Wagner, chief process development section, Rm 3210, Ex 4619.

Transportation Division
Maj. J. R. Parten, director, Rm 6629, Ex 4418-3329.

Marketing Division
John W. Frey, director, Rm 4257, Ex 4646-7.
Paul A. Best, assistant director, Rm 4258, Ex 3518.
Joseph H. Ellender, chief of motor fuel section, Rm 4256, Ex 4434.
Ned F. Foulds, chief of fuel section, Rm 4255, Ex 4797, 4257.
D. C. Arnold, head of asphalt section, Rm 4244, Ex 2787.
Ned Foulds, chief of fuel oils section, Rm 4255, Ex 4797.
Howard C. Cooper, chief of lube oils and miscellaneous products, Rm 4247, Ex 4313.

Materials Division
William F. Huff, director, Rm 7314, Ex 4585.
Sturgis Stentz, assistant director, Rm 7314, Ex 4622-23.
Robert Shirk, senior materials analyst, Rm 7318, Ex 2140.

Research Division
Edward B. Swanson, director, Rm 7315, Ex 649.
Oliver S. Ambrose, assistant director, Rm 7317, Ex 4777.

Conservation Division
Everett Lee De Golyer, director, Rm 7514, Ex 4459.

Legal Division
J. Howard Marshall, chief counsel, Rm 6649, Ex 4100.
Robert E. Friedman, associate chief counsel, Rm 6424, Ex 668.
David M. Hudson, associate chief counsel, Rm 6422, Ex 793.

OPM Priority Consultant
O. A. Davis, acting head priority specialist, Rm 7342, Ex 4616-17.

Executive Officer
Stanley W. Crosthwait, Rm 6415, Ex 4363.

Information Division
Herbert A. Yocom, director, Rm 7513-15, Ex 3844, 4650-3844.

Petroleum Supply Division
Robert Lee Minckler, director, Rm 7452, Ex 4834.
R. C. Sauer, assistant director, Rm 7452, Ex 2083.

Foreign Division
James T. Duce, Rm 4442-40, Ex 4417.
Wm. D. Crampton, associate director, Rm 4448, Ex 4788.
C. S. Snodgrass, associate director, Rm 4450, Ex 4789.
Walter R. Lange, tanker co-ordinating expert, Tanker Co-ordinating Board, Rm 7510, Ex 4744-4437.

Receptionist
Mrs. Rosalie E. Reid, Rm 6635, Ex 3429-4820.

Liaison
Gen. Walter B. Pyron
Liaison agent between Army Department and OPC, Phone RE 6700, Ex 6044, Rm 3062, Munitions Bldg., Constitution Ave. between 19th and 21st Sts.

War Production Board

Petroleum Machinery Section, Special Industry Machinery Branch—Temporary Bldg. E, 5th Wing—Third Floor, Phone REpublic 7500, Ex 3441.
A. E. Collins, chief, Ex 5741.
John W. Choates, refinery equipment, Ex 72615.
William L. Clark, production machinery, Ex 72615.
E. B. Miller, production and refining equipment, Ex 5751.
M. A. Willner, production and transportation, Ex 72615

Oil Section—New Social Security Bldg., Rm 4613, Phone REpublic 7500.
Dr. Walter Whitman, petroleum consultant, Rm 3082, Railroad Retirement Bldg., 4th & C St., S. W., Ex 6310.
C. C. Monrad, assistant, Rm 3090 Railroad Retirement Bldg., 4th & C St., S.W., Ex 2983.

Office of Price Administration

Temporary D Bldg., 4th and Independence Ave., Phone REpublic 7500.
Leon Henderson, administrator, Rm 46, Ex 5586.
Dr. J. K. Galbraith, staff deputy administrator, Rm 258, Ex 5203.
Dr. George W. Stocking, assistant administrator, fuel division, Rm 245, Ex 6844.
George Doffing, price executive of fuel section, Rm 236, Ex 5388.
Joseph H. Salmon, petroleum division unit chief, Rm 2703, Ex 6376.
Robert Collacott, head of refined products division, Rm 2705, Ex 6636.
Dr. Walter Voskuil, chief of research. Rm 2723, Ex 6370.
Peter Jensen, business specialist on lubes, fuel oils, asphalt, Rm 2709, Ex 4916.
Harry R. Booth, chief counsel, fuel division, Rm 1604, Ex 6359.
George H. Goss, administrative officer fuel section, Rm 236, Ex 5389.
Leo Van Herpe, chief of fuel section accounting division, Rm 2230, Ex 5539.
Watson B. Joyes, consultant in crude oil division, Rm 2717, Ex 4403.
Joel Dean, handling gasoline rationing plans, Rm 1048, Temporary S Bldg., Ex 71322.

U. S. Tariff Commission

7th and F St., N.W., Phone NAtional 3947.
Petroleum Accounting Section
Kenneth Stone, chief, Rm 155, Ex 123.

Office of Defense Transportation

Interstate Commerce Commission Bldg., Constitution Ave. & 12th St., N. W. Phone REpublic 7500.
Joseph B. Eastman, director, Rm 5136, Ex 3527.
Fayette B. Dow, assistant on pipelines, tank cars, tankers and trucks, Rm 5132, Ex 3536.
J. G. Scott, counsel, Rm 5418, Ex 2460.

Motor Transport Division
John L. Rogers, director, Rm 4211, Ex 2297.
Sam F. Niness, chief of petroleum carrier section, Rm 4221, Labor Bldg., Ex 6351.
W. T. Cumming, chief of vehicle maintenance section, Rm 4215, Labor Bldg., Ex 72731.
T. L. Preble, consultant, vehicle maintenance section, Rm 4215, Labor Bldg., Ex 72775.
Gavin W. Laurie, consultant, vehicle maintenance section, Rm 4215, Labor Bldg., Ex 72775.
R. D. Thomas, chief of tire maintenance section, Rm 4211, Labor Bldg., Ex 71446.
H. H. Kelly, chief of allocation and materials section, Rm 4326, Ex 72912.
Leon F. Banigan, assistant to Kelly, Rm 4326, Labor Bldg., Ex 3644.

Congress

Congressional Oil Investigating Committee
Rep. Wm. J. Cole, Jr., chairman, New House Office Bldg., Rm 1535, Ex 699.

Senate Oil Shortage Investigating Committee
Sen. Francis Maloney, chairman, Senate Office Bldg., Rm 354, Ex 1196, phone NAtional 3120.

Petroleum Industry War Council

William R. Boyd, Jr., Chairman, Suite 700B Shoreham Hotel. Phone ADams 1926. Allan H. Hand, secretary-treasurer.

U. S. Maritime Commission

Commerce Department Phone REpublic 6620.
B. B. Jennings, director of tanker operations, War Shipping Administration, Rm 4309, Ex 87, 88, 89.

reaucracy, including the OPC itself, is so far removed from the problems that it is bound to make mistakes—and serious mistakes. A glaring illustration was that it took ten weeks of hard work by oil marketing equipment manufacturers and oil men to correct the drastic errors in M-68-c, which froze oil marketing equipment solid, even though Deputy Petroleum Co-ordinator Davies, and Chief Counsel Marshall and Director of Marketing Frey and their staff personally took up the fight for the corrections of faults in the order which caused it to go way beyond what the OPC ever intended it to do. And for their personal effort, the industry owes these men its thanks.

While the same thing might have happened with a state bureaucracy in charge, the average business man would rather take his chances, we believe, on getting quicker action from a bureaucracy close at home than one way down in Washington.

For several years Roosevelt and Ickes undertook openly to buck the states in their own conservation effort. A bill was introduced in Congress to that effect that was one of the most drastic and slippery and weasel worded that could have been written. The oil states rebelled, but despite their opposition Roosevelt and Ickes stood pat. They were, however, unable to put over on the states this seizure of all conservation authority under language which would have permitted federal control of operating details.

WHEN Ickes undertook his job of petroleum co-ordinator, the industry believed with considerable grounds that he still was trying to federalize it. Some of the mistakes that occurred probably would not have come about had there been a closer and more open relation between the WHOLE OIL INDUSTRY and Ickes and his staff.

Ickes' statement last week to the state conservation men, we believe, was the first really clear-cut, definite statement that Ickes has made recognizing the state authorities and their rights and particular abilities in managing their own problems.

These state organizations are not perfect. They, too, have made mistakes. But we believe most every oil man will agree with the petroleum co-ordinator that the states should and can do a better job than can be done from Washington, for that is the gist of the Ickes statement.

The petroleum co-ordinator's staff has grown to be a large and an able one. It has some of the best men from the oil industry, many giving their time for a dollar a year. These men are being well directed by their department heads.

But, as Petroleum Co-ordinator Ickes says, these men are seeking to work WITH the oil industry, to HELP the oil industry and to help the various state authorities in the industry's effort to supply the petroleum products that this country must have for the war.

Congratulations to the Co-ordinator for getting on such sound ground at a time when every energy is needed in the war effort rather than to be spent in protecting any or all of our "four freedoms" from attack from Washington.

Synthetic Rubber Steel Requirement Studied by P.I.W.C.

NPN News Bureau

WASHINGTON — Decision as to which synthetic rubber process requires the least steel for Petroleum Industry War Council's proposed 300,000 tons of synthetic rubber for civilian use, is being studied, a well-informed source here reports.

Oil industry men who will make this decision and submit it to Office of Petroleum Co-ordinator which in turn is expected to seek the necessary steel from the War Production Board, follow: (Names in parentheses are alternates).

Technical subcommittee — C. T. Delbridge, manager of research and development, Atlantic Refining, (M. J. Fowle, assistant manager of Atlantic's research and development); Dr. J. B. Rather, manager of research and development, Socony-Vacuum, (John Happle, assistant manager of Socony's research and development); Daniel Tyzell, vice-president of Shell Union, (E. D. Cummings, Shell's manager of manufacturing); E. W. Isom, Consolidated, (H. L. Pelzer, rubber specialist for Rubber Synthetic Co.); G. G. Oberfell, vice-president of research, Phillips, (R. C. Alden, director of research, Phillips); R. P. Russell, executive vice-president of Standard Oil Development, (W. S. Asbury, assistant to Russell); K. G. Mackenzie, assistant to vice-president and director of research, Texaco, (Dubois Eastman, assistant director of research, Texaco).

Dobey Keith, M. W. Kellogg Co., is committee's technical advisor and consultant on equipment.

Economics subcommittee — Joseph E. Pogue, chairman, petroleum division, Chase National Bank; Dr. C. L. Burrill, New Jersey Standard's economic department; W. L. Finger, Standard Brands; W. C. Allen, Texaco and George H. Taber, Consolidated.

WASHINGTON — It will require almost a "miracle" to produce 300,000 tons of synthetic rubber in 1943, President John L. Collyer of the B. F. Goodrich said in a report to stockholders on April 21.

U. S. Rubber to Manufacture Buna-S Type Synthetic

NPN News Bureau

NEW YORK—U. S. Rubber Co. has announced the appointment of John P. Coe to head its newly created synthetic rubber division. Mr. Coe also is manager of the company's Naugatuck chemical division.

Company will put into operation a greatly expanded synthetic rubber plant for manufacture of Buna-S type synthetic in New England some time this year. A small pilot plant has been in operation there since January, 1941.

Urges U. S. Buy Surplus 'Gas'

Special to NPN

AUSTIN — Col. Ernest O. Thompson, chairman of the Texas Railroad Commission, has urged the government to buy up surplus gasoline from Southwestern refineries and store it near Army camps.

Gulf Coast Without Tankers, I.P.A.A. Told

Special to NPN

FT. WORTH—Stoppage of all tanker movements and consequent piling up of stocks in the Mid-Continent and on the Gulf Coast were the chief subjects discussed by speakers and members at the spring meeting of the directors of the Independent Petroleum Assn. of America here April 23 and 24.

In introducing the speaker of the evening at the closing banquet April 24, Charles F. Roeser, Ft. Worth, past president of I.P.A.A., spoke of the serious problems facing the industry and made the statement that now not one tanker was leaving Gulf ports. How long this situation has existed or when relief might be expected he did not reveal, but he did say later this situation was "a temporary thing".

Urges Pipeline Construction

Frank Buttram, president of I.P.A.A., gave the transportation bottleneck as an example of the importance of this country being self-supplying so far as strategic materials are concerned. Lack of adequate pipeline facilities to Atlantic Coast is the price paid for reliance on cheap forms of transportation, he said, declaring that to assure the ultimate efficiency of the industry in the war effort two things must take place: first, War Production Board must allocate necessary material to construct a pipeline to Atlantic seaboard, and second, the price of crude must be raised to permit independent producers to meet increased costs and taxation.

Mr. Buttram told oil men that gasoline, long the product around which the present price structure is built, is becoming a drug on the market. "Our big cash crop is gone and is no longer the principal objective of our activities," he said. "We have heard with incredulity the suggestion made that we pour our gasoline back into the wells and make room in our storage for cruder but more desired products."

Sees Future Bright For Oil

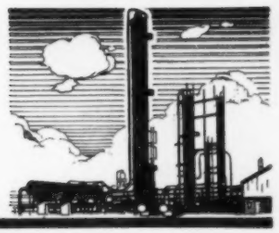
He told producers the present difficulties of the industry were temporary and due to maladjustment within the industry, but said that over the long time war, oil demand would reach new heights.

Executive committee was appointed to study proposals for loans to operators by government, proposed by Sen. Connally. Committeee is composed of Charles F. Roeser, Ft. Worth; N. T. Gilbert, Tulsa; Ralph Zook, Bradford, Pa.; E. C. Moriarity, Wichita, Kans.; Harry Leonard, Roswell, N. M.; and Guy Warren, Corpus Christi.

Committee announced change of dates for the annual convention at Wichita, Kan., to Oct. 20, 21, and 22.

Six new directors were named by the executive committee: G. C. Mortimer and L. A. Nordan, San Antonio; Maston Nixon, Corpus Christi; A. D. Barnett, Wichita, Kan.; W. P. Luse, Dallas, and Jim McManon, Tulsa.

REFINING NEWS



Gulf Independents Oppose Refinery Control Proposal

Special to

HOUSTON—A plan for month-to-month operation of District 3 (Gulf Coast) refineries, which would place output of individual plants more nearly under the direct control of Office of Petroleum Co-ordinator, has been submitted to OPC for study.

Broad in its application, the control plan, which was devised by the District 3 general committee in collaboration with Robert L. Minckler, director of OPC's supply division, aims at getting utmost production of war-essential products while at the same time assuring, as nearly as possible, continued operation of plants incapable of turning out products needed for war.

A lever for enforcement would be application of priorities on transportation, giving preference to certain refineries while denying it to others.

Independents Protest

Announcement of the plan came April 23 from Charles F. Roeser, District 3 general committee chairman. Same day, members of Gulf Coast Refiners Assn., meeting here, heard from the District 3 refining committee that the plan was only tentative and that discussion therefore was useless. The "tentative" plan, however, met with considerable opposition from some independent refiners. They claimed it would not give them enough transportation to live.

G. C. R. A. meeting brought out that Roy B. Jones, Wichita Falls, Tex., District 3 refining committee chairman, had made a long fight against the refinery control plan's restrictions on independent refiners.

It's reported that the plan is now being studied by District 3 functional committees. It will not go into effect until approved by OPC.

Provisions of Plan

In brief, it provides

1—District 3 refining committee shall for each calendar month determine quantity of products needed from the district's refineries required to meet market demand within the district, which quantity may be broken down as between refineries producing war products as specified by OPC and those not producing such products, and as between seaboard and interior refineries.

2—OPC's director of transportation shall, after consultation with the District 3 transportation committee, the Tanker Co-ordinating Board, and other appropriate committees and agencies, submit to the District 3 refining committee on or before the first of the month preceding the month in question, a report showing the total tanker, tank car, barge, pipeline and tank truck transportation available for moving products from District 3 to other districts of the U. S.

3—OPC's director of supply shall, on or before the first of the month preceding the month for which determination is made, report to the refining committee on the quantity of products not included in 1 or 2 above, for shipment outside the continental U. S.

4—District 3's refining committee shall, from determination of reports in 1, 2 and 3 above, determine for each calendar month the total outlet available for products from District 3 refineries.

5—OPC's director of refining shall, on or before the first of the month preceding the month for which determination is made, report to the refining committee "the petroleum war products as specified by him, production of which at stated or maximum rates is necessary in District 3."

Devise Operation Plan

With this data on hand, the plan proposes that the District 3 refining committee devise each month a plan for operation of individual District 3 refineries (a) to produce petroleum war products with minimum refinery runs and (b) to distribute equitably among District 3 refineries the remainder of the total outlet available, after deducting the minimum runs described in (a), in such a manner as to give the district's refineries as nearly as possible the same percentage of operations under the plan based on average crude runs during the last 6 months of 1941.

Application of the plan only to seaboard refineries at first is contemplated. But extension to inland refineries in District 3 is provided "whenever, in the opinion of the Director of Refining of the Office of Petroleum Co-ordinator or of the Refining Committee of District 3 with the approval of the Director of Refining of the Office of Petroleum Co-ordinator, such action is necessary or advisable."

Requires OPC Directive

Each month, the plan worked out by the District 3 refining committee, in addition to any changes which OPC in Washington might deem necessary, would have to be approved by OPC's chief counsel. Granted this approval, a "directive" from OPC that the plan be placed in effect would be the final stage and "all refineries in District 3 shall be operated at an average monthly rate not in excess of that established by such plan".

Should transportation facilities be inadequate for carrying away the total output called for in the OPC "directive", transportation would be allocated as follows:

Transport Priorities

First, for petroleum war products;

Second, for other products of refineries producing war products to the extent necessary to enable the continued production of war products;

Third, the remaining transportation available would be distributed "equitably among the refineries" using the same principal described in (b) above.

In addition, the plan calls for the District 3 production committee to be fully informed of the crude requirements as determined according to the formula and for the production committee to advise the OPC and the refining committee as to the ability to produce crudes of the various grades, broken down by states and areas.

Exceptions to provisions of the plan may be granted by OPC's refining director upon his determination of whether or not adherence would "interfere with required production of petroleum war products".

May Make Butadiene From Motor Fuel

NPN News Bureau

WASHINGTON — Reforming motor gasoline to make butane for butadiene is being studied by Office of Petroleum Co-ordinator as one means of utilizing gasoline stocks at the Gulf, according to Wright Gary, OPC's refining director.

Gulf Coast refinery runs have been adjusted to minimize gasoline output, yet this "by-product" of war orders is filling tanks because there is no transportation to carry it away, Mr. Gary explained to a special Senate committee April 24.

"So, we are trying to find a way of utilizing this gasoline rather than resort to the calamity of burning it just to get rid of it or putting it back into the ground," he said.

Refinery Operations

(American Petroleum Institute figures in barrels of 42 gallons. Figures are U. S. totals and are on a Bureau of Mines basis. Breakdown by districts will be published in May 6 NPN.)

	Week Ended Apr. 25,'42	Week Ended Apr. 18,'42	Week Ended Apr. 26,'41
Crude runs to stills (Da. avg.)	3,506,000	3,548,000	3,709,000
Gasoline production at refineries including natural blended	10,535,000	11,005,000	12,273,000
Finished & unfinished gasoline stocks	102,897,000	103,502,000	96,172,000
Gas oil & distillate stocks	29,240,000	29,329,000	31,066,000
Residual fuel oil stocks	81,107,000	82,577,000	92,324,000

Oil Industry Scrap Drives Pushed Ahead at Top Speed

NPN News Bureau

WASHINGTON — Milton Singleton, in charge of scrap collection in the oil industry for War Production Board, has gone to West Coast for about 2 weeks to work with oil company executives in speeding up and perhaps broadening the scrap collection campaign already under way out there.

Mr. Singleton, New York, vice-president of Valvoline Oil Co., is salvage director for the oil industry in the industrial salvage section of WPB's Bureau of Industrial Conservation. Generally, the scrap collection drive is handled through regional offices, but scrap collection in the oil industry is a special WPB operation.

Urged on by this section, oil companies big and little literally are expected to go through the fields, through their plants, through their yards, through their store-rooms, through their warehouse with a fine tooth comb to bring in the scrap that will keep plants and furnaces operating.

Methods Outlined

Major companies and larger independents are being contacted first, most of them agreeing to these suggestions of George T. Weymouth, chief of the industrial salvage section:

1. Appoint one man to direct the salvage campaign, vested with authority to act now.
2. Develop a method to tell all employes about the collection.
3. Keep the program alive.
4. Tell the Bureau what steps are planned, and then report regularly on the amount of materials collected.

32,000,000 Tons Needed

It is estimated that the nation's steel mills will have to produce 90,000,000 tons of steel this year. And to turn out this amount, at least 32,000,000 tons of iron and steel scrap are required.

Materials most urgently needed are iron and steel scrap; non-ferrous metals such as aluminum, copper, brass, zinc; manila rope, rubber, burlap, waste paper, and cotton and woolen rags.

As an example of what has been done, 25 old, shut-down refineries in Texas were salvaged, dismantled, and the scrap shipped to the mills, it was said. Throughout Texas in one drive, according to estimates here, 1100 carloads containing 100,000,000 lbs. of scrap were collected.

One oil company has begun the collection of what will amount to 24,000 tons of iron and steel scrap, 400 tons of nonferrous scrap, 300 tons of paper and 35 tons of rubber.

Can Requisition Scrap

General collection drive in the oil industry is expected to uncover some abandoned equipment whose owner is not immediately known. This is where the special projects section, which has been holding off on its activities in the oil industry, will come in.

Special projects section was organized recently to speed up scrap collection where legal deadlocks, clouded titles, and other bottlenecks stood in the way.

When the scrap is located, the field men find the owner and through negotiations try to have him sell to an ordinary scrap dealer. If the owner refuses to sell at a fair price, WPB has the authority to requisition, and has used this authority on occasions.

Synthetic Rubber Program Boosted to 800,000 Tons

NPN News Bureau

WASHINGTON — Synthetic rubber program has been boosted to 800,000 tons yearly by increasing the projected output of the Buna-S type by 100,000 tons.

Chairman Nelson of War Production Board and Rubber Coordinator Arthur B. Newhall announced on April 25 that WPB had directed Reconstruction Finance Corp. to provide facilities for an annual production of 700,000 tons of Buna-S "to be in operation not later than the end of 1943". The 800,000-ton program includes 100,000 tons of Butyl and Neoprene which was in the previous program.

WPB said it would give all the priority and allocation assistance necessary to assure the production of at least 350,000 tons of synthetic rubber during 1943. None of this rubber will be available for civilian use, WPB says.

Five Majors Plan Non-Profit Plant To Make Synthetic Rubber in Texas

Special to NPN

AUSTIN—Texas has granted a permit to the Neches Butane Products Co. to put up and operate what is reported to be a $50,000,000 plant to manufacture synthetic rubber from butadiene.

Story of the plant first came to light when the five major oil companies, which own all the stock in the proposed plant, applied to Secretary of State William Lawson for a charter. With caution, they wanted an opinion from Texas Attorney General Gerald Mann that the operation of the plant would not be in violation of the state's anti-trust laws.

Mr. Mann, quoting from Attorney General Robert Jackson, reported back that in view of the fact that the nation is at war, the 5 companies could pool their men, materials and knowledge without violating any laws.

It was brought out that the plant will be built by the Defense Plant Corp., a government agency, and rented to the Butane Products Co. for $1 per year. The company has agreed to deliver its product to the Rubber Reserve Co., a subsidiary of the RFC, at cost, Mr. Mann's opinion brought out.

The attorney general's opinion read, in part:

"At the request of the Federal Government the stock-ownership of the . . . company has been apportioned among the five oil companies enumerated (Gulf, Atlantic, Pure, Socony-Vacuum, and Texaco) for two reasons: (1) because it is anticipated that the raw materials going into the manufacture of the synthetic rubber is to be supplied from the oil refineries of these companies and (2) because the same companies are to furnish from among their employes the personnel with the necessary chemical, engineering and other technical skill and training for directing the proposed undertaking. . . .

"Under such circumstances, we are of the opinion that the anti-trust laws of Texas have no application to the proposed operations of the Neches Butane Products Company. . . ."

The applications of the oil companies for their state charter show that the plant will be located at (*censored by the editor*). Representatives of the company conferred with Gov. Coke Stevenson, who later told newsmen that he understood it would require some 18 months to get the big plant into operation.

The application names W. H. Hoffman, Roosevelt Hotel, New York, as president of the company.

OPC Eases Limits On Additives Use

NPN News Bureau

WASHINGTON — Manufacturers and distributors of automotive lubricants may use additives for general passenger car lubricants to a limited extent, under a recent amendment to the original recommendation of the Office of Petroleum Coordinator on the use of additives in lubricants (Recommendation No. 40 issued March 15).

The original order called for the elimination of lubricants with additives in the transmissions of civilian passenger cars by the substitution of a straight mineral type lubricant and by the elimination of the use of chlorinated lubricants in chassis lubrication.

Now, manufacturers may use additives for passenger car lubricants, but are called upon to reduce the amount used "to whatever extent possible and practicable", but at least by 25% of the amount of additives used in extreme pressure lubricants in the calendar year 1941.

Allows Flexibility

The amendment was made to allow flexibility in the use of additives for passenger car extreme-pressure lubricants where necessary to meet car manufacturers' recommendations. At the same time it keeps the amount of additives used, which include chlorine and other critical materials, within the quantity allocated to the oil industry.

Cars used in military and other essential services are not affected by the order, or the amendment.

Arnold Urges Change In Patents Law

NPN News Bureau

WASHINGTON — Amendment of the patent law to force disclosure of the "know how" in settlement of anti-trust suits involving alleged abuses of patent privileges was urged by Assistant Attorney General Arnold before Senate patents committee on April 24. In theory, the licensee gets the "know how" with the patent, but actually he doesn't—according to Mr. Arnold.

Chairman Bone of the patents committee asked Mr. Arnold to dig up a flagrant case where patentee's withholding of the "know how" had hampered the war effort—such as lack of some gadget preventing a rifle from being fired properly, Sen. Bone said.

Public wrath, Sen. Bone predicted, would be so great "we would soon have a new patent law".

Refining Technology

INCLUDING INTERNATIONAL PETROLEUM TECHNOLOGY

War Program Brings Refiners Opportunity To Prepare for Future Peacetime Markets

● While the changes the war is bringing to refiners are drastic, it is, nevertheless, becoming apparent that these changes are not as far reaching as in some industries and also that they are bringing opportunities to refiners to prepare for the future civilian and peacetime markets. The frank progress reports which Wright Gary, director of refining for the Office of Petroleum Co-ordinator at Washington, has made the past few weeks before the Western Petroleum Refiners Assn. and the National Petroleum Assn. have brought out why petroleum refining is more favored in its wartime role than some other lines of business.

First, the refining industry's full facilities are necessary to the war effort. Oil, in the form of many refined products, is truly ammunition, as necessary to winning battles and naval engagements as guns and shells. Refiners are being called on to supply not only the standard products in large volume, but many new ones as well. The war need for 100-octane gasoline, butadiene for synthetic rubber, toluene for explosives and new types of lubricants is already an old story. Before the N.P.A. in Cleveland, Director Gary added another new product to the list, benzene. It will be needed, among other uses, to supply aromatic hydrocarbon compounds to aviation gasoline, to improve its power. It is also a source of styrene for rubber, and toluene. Already the use of all benzol in motor fuel has been stopped, to enable a stockpile to be built up against the coming direct war need.

A second reason why the change to a war footing is less drastic on refiners than on some other businesses is that the new products can mostly be made in existing equipment at refineries, and the building of new plants is mainly to increase capacity. The new plants are complementary to existing refineries. Modern catalytic cracking units that a few months ago were making high quality motor gasoline are now producing alkylates for 100-octane aviation fuel. Other units are turning out base stocks for aviation gasoline. Units capable of being operated at high temperatures can produce aromatic hydrocarbons of the benzene series from selected stocks, Director Gary told the western refiners.

A speaker for the automobile industry brought dramatically before the refiners at the Cleveland meeting how far reaching have been the changes the war has brought to the car manufacturing business. Director George Romney, of the Automotive Council for War Production, quoted a portion of a verse from the Gospel of St. Matthew; ". . . . whosoever will lose his life for my sake shall find it." The automobile manufacturers, he said, have given the life of their pre-war industry to save our civilization. They will some day turn back to peacetime pursuits from manufacturing engines of war, but even today, he said, their research departments can't tell what form of automotive vehicles they will design and manufacture then. The changes that refiners are being called on to make seem to call for less sacrifice than this.

Third, refiners are in a better position to meet today's needs than are many industries because their plants already have the capacity to turn out war time supplies in large volume. Refiners' markets for motor gasoline are being reduced, Mr. Gary said in Cleveland, and will likely never come back in the same form, because the motor fuel of the future will be a very different product. This reduction in demand for motor fuel is freeing existing equipment to make some of the wartime products.

To illustrate this point, Mr. Gary said that the output of aviation gasoline from existing equipment had been doubled in the last 3 months. He urged the technical men in all refining companies to study the extent to which they could convert units which have been making motor gasoline to turning out essential war products. As contrasted with petroleum refiners in having equipment available, Mr. Gary said the chemical manufacturing industry could also produce the butadiene and styrene for synthetic rubber but that it did not have the facilities in volume and that even new chemical plants built could not be put to this use.

Fourth, the markets for the new products the refineries are turning out will undoubtedly continue after the war. Director Gary and automotive authorities have stated that, when motor cars are designed again for general civilian use, the automotive engineers will benefit from the experience gained in designing airplane engines to make more efficient use of fuels, and the new cars will call for a gasoline of 100 octane or possibly higher. Commercial aviation will also call for large volumes of a similar fuel. Improved Diesel fuels will continue to be needed, also the new heavy-duty type of engine oils, which would have been introduced to a good share of the motoring public this summer, had not the war demand taken the available volumes of the new types of additives necessary to make these lubricants.

That the smaller independent refiners can have an important role in this necessary program of converting and re-

adjusting plant operations to meet wartime demands has been pointed out before. Their part is now emphasized, Mr. Gary said in Cleveland, by the fact that cost surveys on the manufacture of aviation gasoline show that groups of independent plants are making this material at as low cost as the plants of the large refiners. Where a few small plants within a limited area can combine their facilities and their crude and charging stocks in a co-operative effort, he stated they can be competitive in price with the large refineries. The fact, he brought out, together with the assurance that the markets for the new products will continue after the war, should enable smaller refiners, even in groups, to figure on new units without assuming that "a government umbrella would have to be held over them". Group proposals, said Director Gary, would entail less steel and other building materials and equipment than a number of smaller units built by individual companies, and were more likely to receive approval of government authorities.

Salvaging is Given Impetus By Scrap Collection Drive

Profitable salvaging operations and checkups on idle and obsolete equipment are being made at many refineries in conjunction with the emergency scrap metal collection program.

Company executives and plant superintendents are using the impetus of the nation-wide drive to get in more scrap metal and thus keep the furnaces of the steel mills from shutting down and halting war production, to look into their own plant housekeeping.

Their salvage programs include dismantling worn out pumps, heat exchangers, condensers, valves, fittings and lines, and cleaning and storing all parts that will be used later when equipment now in use needs repairing. Some plants are making a record of such parts against future needs.

In some oil companies the management is also checking on idle equipment, to determine if it is obsolete and can be torn down and sold to scrap dealers in the emergency. These officials are looking at the stills, towers, and other equipment not now in use from the point of view that the present conversion program of all refineries to turn out more essential war time products is making obsolete equipment that might be put back in use in normal times. Where such equipment is declared obsolete, arrangements are being made with outside contractors to have it torn down at once, rather than to wait until the work can be done by the refinery crew.

Many refineries have found that their regular collections of scrap metal are increased where barrels or bins are provided in the various departments, for nuts, bolts, nails and small metal bits. Sometimes these receptacles are labeled, *"Take a Slap at a Jap with Scrap"*, or variations.

Following is comment from a few refinery executives on their experiences in collecting more scrap metal in the plants:

"In addition to our normal practice, a thorough clean-up campaign has been instituted to collect all loose material throughout the refinery," said M. J. Rathbone, president, Standard Oil Co. of Louisiana, Baton Rouge. "Old barrels have been painted and placed at convenient locations, labeled with the slogan, *'Save Scrap to Beat the Japs'*. Separate drums are used for scrap rubber.

"Idle and obsolete equipment has been dismantled and excess equipment is being removed. Maintenance and construction crews have been instructed to remove all idle equipment from the jobs they are working on. Lists are being made of all idle machinery, valves, fittings and lines for future use, in order to keep us from purchasing new material.

"A series of talks has been made by the assistant general superintendent in charge of maintenance and construction, and material salvage has been stressed in our plant paper. We have a contract with a scrap dealer to remove our accumulation weekly."

Refinery Is Clearing Point

"We have agreed to act as a central collecting point for oil field scrap in this vicinity and to date have shipped 16 carloads of this material," stated Harold Bottomley, chief engineer, Cosden Petroleum Corp., Big Spring, Texas.

"In our own plants we are continually scrapping old and obsolete equipment and shipping it as it is prepared. Employes have been notified regarding the scrap collection campaign; all old license plates have been collected and a large number of householders have sold scrap to local dealers.

"All the scrap that is available here at the refinery is shipped directly to the steel mills. Although we have moved 1,500,000 pounds from this locality, we feel that there is much more available that should be shipped, including especially obsolete oil field equipment, old pipe, etc."

"We keep accumulating all the scrap metal we can find and ship it in as fast as we have sufficient quantities", wrote F. E. Holsten, vice president, Chalmette Petroleum Corp., Chalmette, La. "In addition to this we have placed receptacles throughout our yard, with the word *'Scrap'* on them, so that any of our men who pick up small metal pieces can drop them in these scrap buckets."

Said Kent W. Bartlett, refining division, American Mineral Spirits Co., Corpus Christi, Texas: "While we have been using painstaking attention to recover every bit of scrap of every nature from our plant, we are now taking one further step which may result in getting us a small amount of scrap which is now lying in the dirt of the plant. We have built scrap bins and we have asked each workman to keep on the lookout as he goes his rounds and pick up whatever little thing he finds, even nails, small bolts, washers, nuts, etc. and throw them in the bin. We are hoping for good results."

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See Supply of Aviation Gasoline Enlarged Through Hydrofluoric Acid Alkylation

LARGE new sources of high-octane hydrocarbons for the manufacture of aviation gasoline, within the natural gasoline and refining industries, will be made available through the new hydrofluoric acid alkylation process, it is claimed. At least 3 major oil companies are said to be now putting up plants to operate on the process.

The hydrofluoric acid process, patent on which was issued to Universal Oil Products Co. Dec. 30, 1941, will make practicable, it is said, the use of propylene (propene) as the olefin compound in the reaction. It is claimed the process alkylates propylenes, butylenes and pentylenes, either singly or together. The sulfuric acid alkylation process as used to date is said to present difficulties in alkylating other compounds than butylenes.

The availability of propylene to combine with iso-butane, the paraffin in the alkylation reaction, would more than double the potential supply of olefin compounds to make the alkylate blending agent for 100-octane gasoline. The volume of propylene potentially available from catalytic dehydrogenation and cracked gases was estimated in 1939 by Gustav Egloff, of Universal Oil Products Co. research laboratories, as 290,500,000,000 cu. ft. annually. His estimate of the potential volume of butylene from the same sources was 148,800,000,000 cu. ft.

By alkylating the propylene, now used in part as refinery fuel and in part in polymerization, said Dr. Egloff, if the supply of iso-butane were available for the reaction, the output of alkylate could be about doubled without going outside the refinery. The potential supply of pentylene, a higher boiling point hydrocarbon also found in refinery and natural gas, is said to be half as much as of butylene.

Natural gas is also a potential large source of propane, from which propylene is recovered by dehydrogenation. Dr. Egloff estimated the volume of propane as a gas in natural gas produced in the U. S. in 1939 was 225,000,000,000 cu. ft., and of butane 125,000,000,000 cu. ft. Seventy five per cent of propane can be converted to propylene, it is said.

The octane rating of the hydrofluoric acid propylene alkylate is said to be over 90 and the yield approximately 1.7 gals. of alkylate to 1 gal. of propylene and approximately 1 gal. of iso-butane. This is about the same yield as with butylene. The octane rating of the butylene alkylate is said to be 93.

Other advantages of the use of hydrofluoric acid as an alkylation catalyst are said to be that the reaction is carried out at room temperatures, doing away with the need for refrigeration, and that the yields of alkylate per pound of acid are much higher than with sulfuric acid, being in the neighborhood of 100 gal. of alkylate.

In commenting on other catalysts the Universal hydrofluoric acid alkylation patent No. 2,267,730 states: "Sulfuric acid, for example, cannot be used to effect alkylation with ethylene and gives very poor effect when propylene is used." Catalysts previously tried to effect the alkylation of isoparaffin hydrocarbons with olefins, it is set forth, include sulfuric acid, phosphoric acid, aluminum chloride and boron fluoride. Sulfuric acid, it is stated, in addition to giving poor yields when propylene is used, has a tendency to oxidize hydrocarbons, with the formation of sulfur dioxide, so that the catalyst is gradually lost by reduction and the products of the reactions are contaminated with sulfur compounds and oxidation products.

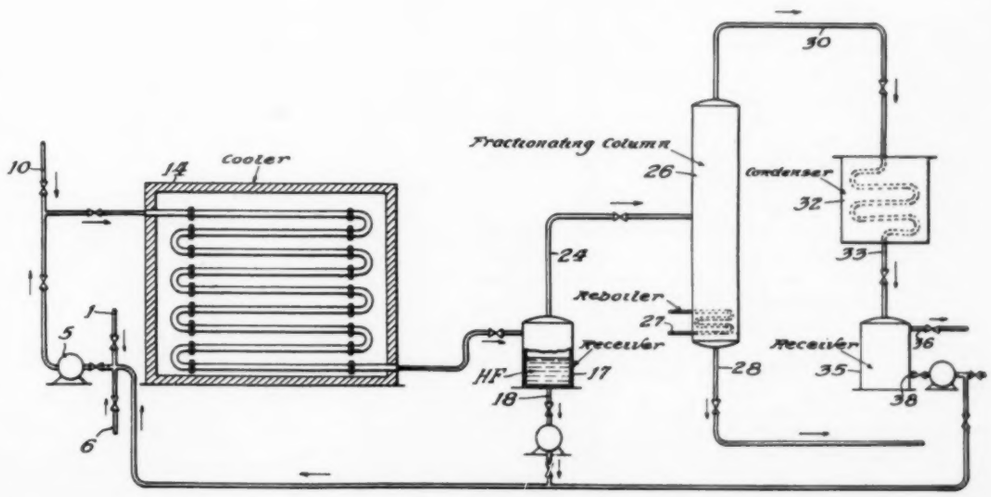
Phosphoric acid has a limited application, it is claimed, but reactions are not accelerated to a practical degree unless undesirably high temperatures are used. Aluminum chloride and similar multivalent metal salts present disadvantages inherent in the use of solid granular catalysts, in that the efficiency of the reaction is to some extent contingent on the fineness of the catalyst and that the recovery of the active salts from their sludges is difficult and expensive. The use of boron fluoride, it is claimed, is not practical on account of its cost.

The Universal patent is summarized as "comprising a process for alkylating iso-paraffin hydrocarbons with monoolefinic hydrocarbons in the presence of liquid hydrogen fluoride under controlled conditions of operation". While previous work indicated that reactions could be brought about in the presence of boron fluoride and minor amounts of hydrogen fluoride, the reactions are better brought about when using merely liquid anhydrous hydrogen fluoride, it is said.

The hydrogen fluoride catalyst is described as a liquid boiling at about 20 deg. C. (68 deg. F.) so that it can be

Batch Operation on Butylene

1—iso-butane enters; 5—pump; 6—hydrofluoric acid enters; 10—butylene, or butylene and iso-butane, enter; 14—cooler; 17—receiver for separation of hydrocarbons and hydrofluoric acid; 18—hydrofluoric acid withdrawn and returned for recycling; 24—hydrocarbon layer taken from receiver; 26—fractionating column; 27—reboiler; 28—alkylate drawn off; 30—overhead products leave fractionator; 32—condenser; 33—rundown line 35—receiver; 36—gas release line; 38—liquid draw off line, by which liquid hydrocarbons are returned for recycling



used in apparatus which is cooled to maintain temperatures below this point, or it can be used at higher temperatures if sufficient pressures are maintained. By maintaining an excess of iso-paraffin at all times, polymerization reactions and the formation of alkyl fluorides are said to be minimized so that the products consist principally of alkylated derivatives of the original iso-paraffins. It is claimed the catalyst is not changed by oxidation or reduction and that, if lost mechanically, it can be readily recovered and reused, while any alkyl fluorides formed are readily decomposable.

Description of Method

The process of hydrofluoric acid alkylation resembles the method using sulfuric acid. In the batch operation described in the patent, (See Fig. 1) the liquid iso-butane and the liquid hydrogen fluoride are introduced separately into a line and mixed by charging through a pump, the butylene, or butylene and iso-butane then being introduced into the line. The mixture passes to a cooler, where the reactions are completed, and to a receiving tank, in which a separation of the hydrogen fluoride and the hydrocarbons is effected. The hydrogen fluoride is withdrawn from the receiving tank and returned to the system, so it is completely recycled.

The layer of hydrocarbons in the upper part of the receiver passes to a fractionating column with a reboiler. The unconverted, low-boiling compounds are removed as overhead, while the higher-boiling alkylated products of the reaction are withdrawn from the bottom of the column, for treating with caustic soda, to make the finished alkylate. The overhead products pass through a condenser to another receiving tank where the gases are drawn off and the liquids withdrawn to storage, or returned to the system to permit further alkylation of the iso-butane.

The hydrogen fluoride which combines with the butylene in the course of the alkylating reactions to form alkyl fluorides is recovered by passing the alkyl fluorides over granular fluorides, such as calcium fluoride or aluminum fluorides, which decomposes them into hydrogen fluoride and the corresponding olefins. The mixture of olefin and hydrogen fluoride is then passed over solid granular sodium or potassium fluoride, which forms addition compounds of the type NaF, HF. The olefin liberated may be recycled for further use and the hydrogen fluoride recovered from the double salt by heating.

The following experimental data is given in the Universal patent, to indicate the results obtainable when utilizing the process for alkylating iso-butane with butylenes to form iso-octanes:

Concentration of Hydrogen Fluoride

"To determine whether the anhydrous material and the water solutions of hydrogen fluoride could be used interchangeably or with substantially equivalent effects, tests were conducted using 100% anhydrous material, a 90% aqueous solution and a 75% aqueous solution. An approximately molal equivalent mixture of iso-butane and iso-butene was passed into the acids of varying concentration, at temperatures from 20-30 deg. C. (68-86 deg. F.), the runs being made in a continuously stirred pressure autoclave.

"Using 100% anhydrous hydrogen fluoride, the recovered hydrocarbon layer consisted of 50-60% octanes, of which about half was 2,2,4-tri-methyl pentane. The hydrocarbon layer was completely saturated and contained only 0.1% of fluorine. With the 90% aqueous solution and a molal ratio of paraffin to olefin of 1.5:1, the hydrocarbon layer consisted of 48% octanes and there was present 1% of fluorine. With a 75% acid solution, an equivalent molal ratio of paraffin to olefin and a temperature of 12 deg. C. (53.6 deg. F.) no alkylation occurred but there was considerable formation of butyl fluorides, iso-butenes forming tertiary butyl fluoride and normal butenes forming secondary butyl fluorides.

Effect of Temperature

"Using a mixture of iso-butane and iso-butene in a molal ratio of 1.5:1 and 100% hydrogen fluoride, best results were obtained at room temperature. At temperatures within the range of —50 to —60 deg. C. (—58 to —76 deg. F.) no alkylation occurred, but there was considerable polymerization of iso-butene. The hydrocarbon layer contained 2% fluorine. At a temperature of +90 deg. C. (194 deg. F.) utilizing sufficient pressure to maintain liquid phase and with a paraffin-olefin ratio of 1:3, the hydrocarbon products consisted of only 20% octanes and large amount of more highly alkylated derivatives. Temperatures as high as 100 deg. C. (212 deg. F.) may be used, if desired, by suitable adjustment of time factor, olefin-paraffin ratio and amount of catalyst used.

Effect of Paraffin-Olefin Ratio

"Using a molal ratio of paraffin to olefin of 3:1, temperatures from 20-30 deg. C. (68 to 86 deg. F.) and 100% hydrogen fluoride, 65% of hydrocarbon product boiling within the octane range and 50% of this material was 2,2,4-tri-methyl-pentane. The percentage of fluorine in the total hydrocarbon products was 0.1%. Using a paraffin-olefin ratio of 1:3 and the same temperature and other operating conditions, 50% of the hydrocarbon products boiled above 200 deg. C. (392 deg. F.) and contained 5-10% olefin polymers, indicating that over-alkylation and polymerization had both taken place."

New Patents

Compiled by R. E. Burnham, patent and trade-mark attorney, 511 Eleventh Street, NW, Washington, D. C., from whom copies may be obtained at rate of 25c each. State number of patent and name of inventor when ordering.

Method of separating liquids and gases—Samuel C. Carney, Bartlesville, Okla., assignor to Phillips Petroleum Co. Filed April 28, 1939. No. 2,277,070.

Process for producing pure benzene hydrocarbons—Hugo Kruger and Kurt Gieseler, Germany, assignors to Sherka Chemical Co., Bloomfield, N. J. Filed Aug. 4, 1938. No. 2,277,115.

Method for separating vapors and liquids—Samuel C. Carney, Bartlesville, Okla., assignor to Phillips Petroleum Co. Filed March 31, 1939. No. 2,277,387.

Method of synthesizing hydrocarbons—Percival C. Keith, Jr., Peapack, N. J., assignor to M. W. Kellog Co. Filed Aug. 4, 1937. No. 2,276,274.

Catalyst—Martin de Simo, Piedmont, and Frank M. McMillan, Berkeley, Calif., assignors to Shell Development Co. Filed Aug. 28, 1939. No. 2,277,512.

* * *

Conversion of hydrocarbons—Elmer R. Kanhofer, Chicago, assignor to Universal Oil Products Co. Filed June 30, 1939. No. 2,275,441.

Conversion of hydrocarbons—Edwin H. McGrew, Chicago, assignor to Universal Oil Products Co. Filed Aug. 12, 1939. No. 2,276,081.

Recovery of solvents from oils—Edward G. Ragatz, San Marino, Calif., assignor to Union Oil Co. (Calif.) Filed June 26, 1937. No. 2,276,089.

Hydrocarbon conversion—Jean D. Seguy, Chicago, assignor to Universal Oil Products Co. Filed Sept. 13, 1939. No. 2,276,103.

Production of motor fuels—Robert B. Ewell, Chicago, assignor to Universal Oil Products Co. Filed April 30, 1940. No. 2,276,171.

Treatment of hydrocarbons—Aristid V. Grosse and Carl B. Linn, Chicago, assignors to Universal Oil Products Co. Filed March 31, 1939. No. 2,276,189.

Production of iso-octane—Louis S. Kassel, Chicago, Ill., assignor to Universal Oil Products Co. Filed Nov. 22, 1940. No. 2,276,199.

Conversion of hydrocarbon oils, and alkylation of hydrocarbons—Jacque C. Morrell, Chicago, assignor to Universal Oil Products Co. Filed Jan. 19, 1935, and Feb. 29, 1940. (3 patents) Nos. 2,276,249, 2,276,250, and 2,276,251.

Catalytic reactor—Harry L. Pelzar, Houston, Texas, and Willis S. Guilette, Highland, Ind., assignors to Sinclair Refining Co. Filed March 27, 1940. No. 2,275,920.

Suppression of metal catalysis—Joseph A. Chenicek, Chicago, assignor to Universal Oil Products Co. Filed Jan. 22, 1940. No. 2,276,158.

Acid purification and recovery—Carl D. Lane, Torrance, and Charles H. Duffy, Long Beach, Calif., assignors to Shell Development Co. Filed Jan. 12, 1940. No. 2,276,210.

Producing polymerized oils—Carl M. Hull, Chicago, assignor to Standard Oil Co. (Ind.) Filed Oct. 8, 1938. No. 2,278,445.

Catalytic cracking of hydrocarbons—Robert F. Ruthruff, Chicago, Filed Oct. 20, 1939. No. 2,278,590.

Refining petroleum oils—Henry C. Paulsen, Elizabeth, N. J., assignor to Standard Oil Development Co. Filed Sept. 14, 1939. No. 2,278,665.

Catalytic reaction of olefins—Eldon E. Stahly and Erwin M. Hattox, Baton Rouge, La., assignors to Standard Oil Development Co. Filed Dec. 2, 1938. No. 2,278,677.

Method of synthesizing sulphur-bearing high molecular weight hydrocarbons—Lloyd L. Davis, Bert H. Lincoln, and Gordon D. Byrkit, Ponca City, Okla., assignors to Continental Oil Co. Filed Sept. 27, 1940. No. 2,278,719.

Method of recovering liquefiable hydrocarbons from gases—Jay P. Walker, Tulsa, Okla., assignor to Eureka Process Corp., same place. Filed May 3, 1939. No. 2,278,750.

Treatment of petroleum and distillates thereof—Charles Wirth III, Chicago, assignor to Universal Oil Products Co. Filed Dec. 19, 1938. No. 2,278,753.

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Performance of Refinery Gas Absorbers With and Without Intercoolers*

By R. M. Jackson** and T. K. Sherwood***

The accompanying data describing full scale refinery absorber operations on cracking coil gas will be helpful to plant operators now concerned with the recovery of selected hydrocarbon compounds for the manufacture of 100-octane aviation gasoline, butadiene for synthetic rubber and other essential wartime products coming from a petroleum base. Results, including percent recovery of the component compounds, are given for winter and summer operations, both with and without intercoolers. The data given show the effectiveness of the intercoolers in boosting recovery rates. In terms of total absorption the intercooler was more effective in winter because of lower cooling-water temperature.

As originally presented, this paper included a comparison of the observed data from operations with results obtained by the standard method of design calculations, using the conditions obtaining in the winter tests. This portion of the paper is omitted as republished here. A summary of observed and calculated dry gas analyses and percent absorption of each component shows the principal discrepancy to be in the case of methane, for which the actual absorption was three times the calculated.

THE absorption of multi-component mixtures from refinery gases and natural gas mixtures is common practice in the petroleum industry. Although absorption as a unit operation probably finds its greatest application in such plants, performance data on full-scale absorbers are very seldom published.

In order to design equipment for the absorption of mixed hydrocarbons it is necessary to have (a) a satisfactory method of calculation, (b) efficiency and capacity data on the equipment types employed, and (c) equilibrium data for the solute-solvent systems encountered. A method of calculation has been developed by Lewis[1] and is described in some detail by one of the authors.[2] Although most of the commercial absorbers are plate columns differing relatively little in design, considerable confusion exists with regard to the plate efficiencies which are to be expected. A limited amount of published plant data[3] indicates plate efficiencies for key components in the vicinity of 15 to 20%, as contrasted with the 70-100% obtainable with somewhat similar equipment operated as gasoline stabilizers. Recent laboratory data of Walter[4] confirm the lower efficiencies for absorption of olefins in heavy naphtha or gas oil. Walter employed his data on absorption of several solutes in a variety of laboratory bubble caps as a basis for a useful empirical equation relating plate efficiency to liquid depth, slot width, gas solubility, and liquid viscosity. In connection with the third requirement for design, suitable equilibrium data, a great deal of information has been published but no general correlation of the available data is entirely satisfactory. Values of K calculated from the fugacity curves[5] are satisfactory up to moderate pressures but make no allowance for the evident effect of the nature of the solvent, which is especially important in the case of very volatile solutes such as methane.

The present paper reports plant data on a refinery absorber operating on cracking coil gas, with and without intercoolers, and compares the results with those obtained by the standard method of design calculation.

Description of Absorber

The absorber tested had an inside diameter of 9 ft. and an overall height of 71 ft., with 19 plates spaced 30 in. apart. Each plate carried 92 bell caps 6 5/16 in. O. D. Each cap had 32 slots ¼ x 1 in. with the bottom of the slot ¾ in. above the plate. The top of the cap was 4 3/16 in. above the plate and the vapor riser was 3½ in. I. D. The plate had straight 6-in. feed weirs and 2½-in. discharge weirs. Below the tenth plate from the top was a blank plate from which the oil could be withdrawn and passed through two intercoolers before going to the eleventh plate. When the intercooler was not used the oil overflowed through chimneys provided for the purpose.

Wet gas entered at the bottom and passed countercurrent to the absorbing oil, the leaving dry gas being discarded to the refinery fuel line. Stripped lean oil was supplied at the top and fat oil removed to the strippers from the bottom.

Test Procedure

Two tests of six hours each were run under summer conditions, one while employing intercoolers, and the other with the intercoolers cut out of the system. This procedure was then repeated some months later under typical winter conditions. The lean oil temperature, tower pressure, inlet gas composition, and ratio of lean oil to wet gas were maintained as constant as possible for both test periods in order that the results with and without intercooling might be comparable.

The flow rates of inlet and outlet gas, lean oil, oil to intercoolers, and cooling water were obtained by meters. The pressures were obtained by means of indicating gages and the temperatures by means of indicating thermocouples, except the temperatures around the intercoolers, which were obtained by calibrated glass thermometers.

Data were recorded at half-hourly intervals for three to four hours, when essentially constant operating conditions were assured. As nearly simultaneously as possible spot samples were taken of all oil and gas streams, including gas entering the top section of the tower. Data were then recorded for another two hours to assure that there had been no change in conditions during the sampling period.

The absorber oil was not analyzed by the usual procedure of introducing a portion of a pressure sample directly into a Podbielniak still, since the per cent light fractions was small and satisfactory fractionation could not be obtained. Instead, pressure samples were first distilled in a true-boiling-point apparatus and the light gas col-

*Portion of a paper presented at the meeting of the American Institute of Chemical Engineers, Virginia Beach, Va., Nov. 3-5, 1941.

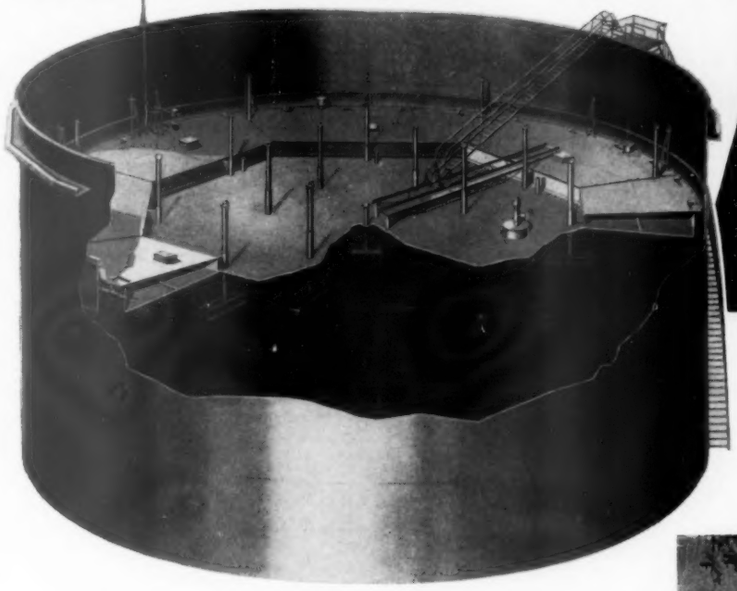
**Standard Oil Development Co., Elizabeth, N. J.

***Massachusetts Institute of Technology, Cambridge, Mass.

How to Convert EXISTING Storage Tanks

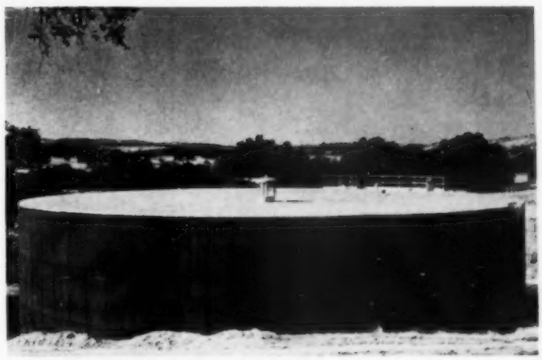
into Efficient Vapor Saving Units for Handling Volatiles

—Install WIGGINS PONTOON— BREATHER or BALLOON Roofs



● *At the left is a cutaway view showing the construction of a Wiggins Pontoon Roof on a butt welded tank.*

Directly below is a 115 ft. diam. breather roof which was installed on an existing crude oil storage tank. At the bottom is a new balloon roof which has been installed on a 78 ft. diam. gasoline storage tank..



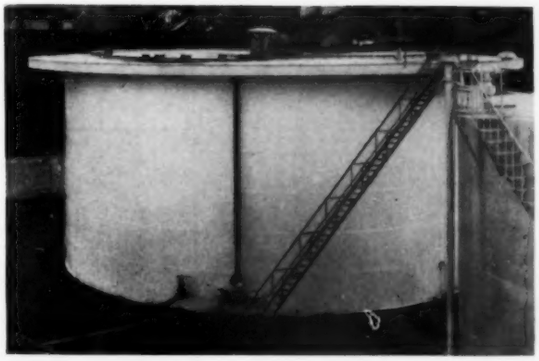
If you are confronted with the problem of storing and handling increasing quantities of aviation gasoline or other volatile oil products, it is important to remember that the installation of completely new tankage to prevent volumetric loss is not always necessary. For example, if you have existing tanks whose shells are in good condition, one of the simplest, most economical methods of protecting volatiles that do not boil at atmospheric pressure against vapor loss would be the installation of Wiggins Pontoon, Breather or Balloon Roofs on these units.

● Pontoon roofs are applicable to riveted, lap welded or butt welded tanks 15 ft. in diam. or larger handling aviation fuel, motor gasoline or crudes.

● Breather roofs are recommended primarily for standing storage tanks larger than 60 ft. in diam. which remain filled, or nearly so, most of the time.

● Balloon roofs are recommended for tanks of all sizes which are filled or emptied not more than six times a year.

Write for complete information.



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lected and inspected by a Podbielniak apparatus. The distillate fractions up to about 300° F. endpoint were separately collected and also analyzed by means of a Podbielniak apparatus. The analysis of the original oil was calculated from the results obtained by this procedure.

Gas samples were withdrawn into three-gallon bottles, displacing saturated salt solution, and taken to the laboratory for Podbielniak analyses.

Method of Calculation of Results

Since there was no measure of the fat oil rate it was calculated by a material balance based on the C_6+ content. The flow rate of C_6+ in lean oil and oil to intercooler checked within 1.5% and the average of the two values was employed in calculating the fat oil rate. The intermediate gas rate (past intercooler) was taken to be the average of the two rates calculated by material balances around the top and bottom of the column.

In order to obtain compatible analyses and rates, the values reported were adjusted slightly on a proration basis as indicated in the tables of data. The necessary corrections were very small except in the case of the dry gas rate in Test 1, where the difference is 9%. The intermediate oil rate in Test 2 was not measured, but was calculated from the lean oil rate and the two oil analyses. The fat oil rate and the total C_6+ in the fat oil were calculated by overall material balances on total materials and on C_6+ respectively, and the C_6+ content of the fat oil taken as the ratio of the two rather than as the reported value.

In most cases the adjustments were hardly within the precision of the analyses and material balances were obtained without greatly altering the indicated flow rates. The corrected figures show good heat balances on the intercoolers.

The viscosity of the lean oil in Tests 1 and 2 was measured at 20° and 100° F. In the case of the intermediate and fat oils this was not possible because gassing occurred even at 20° F. The viscosities were estimated, however, using the ASTM kinematic viscosity blending chart and measured values of the viscosities of gasolines

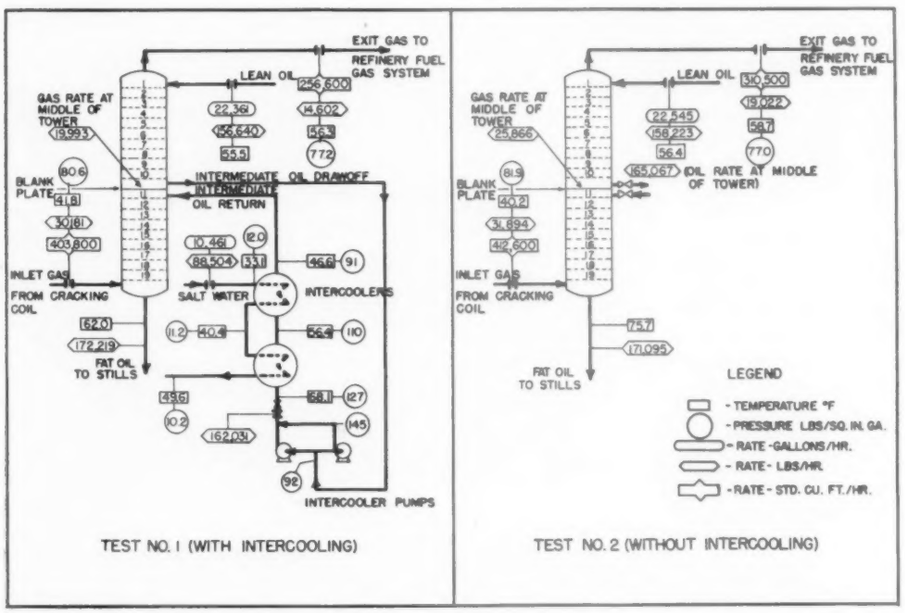

Fig. 1. Flow sheets and auxiliary data on temperatures, pressures, etc. on Test No. 1 (winter with intercooling) and on Test No. 2 (winter without intercooling)

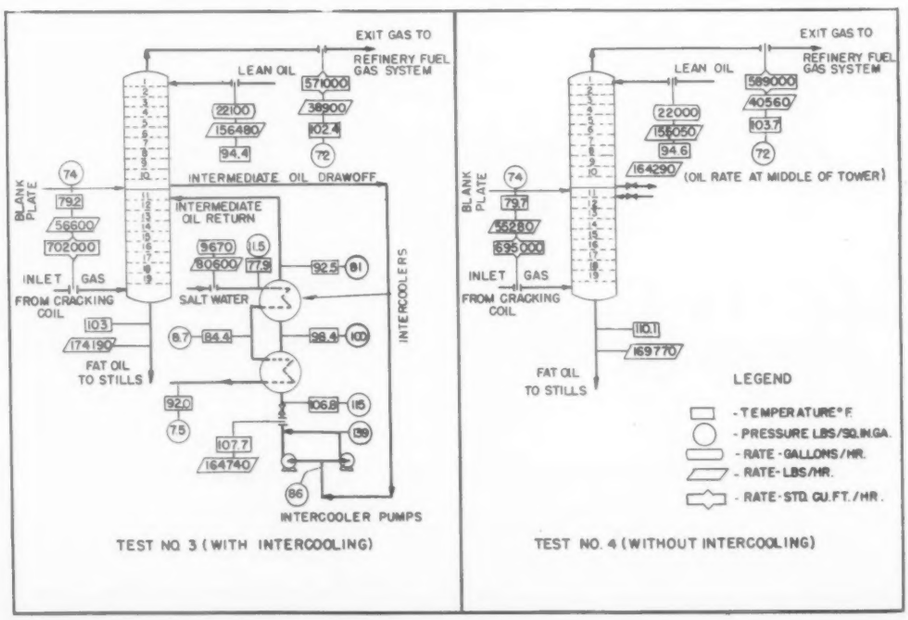

Fig. 2. Flow sheets and auxiliary data on temperatures, pressures, etc. on Test No. 3 (summer with intercooling) and on Test No. 4 (summer without intercooling)

and stripped oil cuts from the samples. Temperature extrapolation from 20° to tower outlet temperature was done graphically on an ASTM chart by means of a line drawn parallel to that for the lean oil. The results obtained are indicated in Table 1.

Table 1.—Viscosities in Centistokes

	Test I		Test II	
	20° F.	100° F.	20° F.	100° F.
Lean oil	5.9	2.2	6.2	2.3
Intermediate oil	3.7	1.6	3.5	1.6
Fat oil	2.1	1.1	2.2	1.2

Tabulation of Data

Table 2 shows the results obtained, and permits a comparison of the determined and correlated analyses. Table 3 compares the measured and corrected flow rates, and Table 4 summarizes the operating conditions in the two tests. Figures 1 and 2 show the flow sheets and indicate various auxiliary data on temperatures, pressures, etc. Table 5 indicates the distribution of heat quantities, and Table 6 shows the percent recovery of each of the several components in both top and bottom sections.

Discussion of Test Results

Referring to the data of Tests 1 and 2 obtained in the winter, the recoveries shown in Table 6 show the normal progression with volatility, with the C_4 and C_5 cuts being almost completely absorbed. Stripping of the lighter ends in the bottom section in Test 2 was due to the rise in temperature of the oil to 75.7° F., effected by

Table 2. Comparison of Original Versus Corrected Analyses

(All Per Cents by Weight)

TEST NO. 1—WITH INTERCOOLERS—WINTER

	Lean Oil		Intermediate Oil		Fat Oil		Wet Gas		Intermediate Gas		Dry Gas	
Components	Measured	Corrected	Measured	Corrected	Measured	Corrected	As Reported	Corrected	As Reported	Corrected	As Reported	Corrected
H_2S			0.162	0.161	0.288	0.288	4.39	4.48	5.86	5.59	5.33	5.86
CH_4 + L*			0.132	0.125	0.590	0.563	21.57	22.85	30.56	30.66	40.82	40.60
C_2H_4			0.137	0.121	0.170	0.167	4.07	4.22	5.61	5.92	6.98	6.75
C_2H_6			1.070	0.991	1.391	1.251	20.11	22.58	31.71	31.34	34.28	31.91
C_3H_6			0.815	0.724	1.238	1.291	9.98	9.77	9.03	9.52	4.88	5.00
C_3H_8			1.225	1.157	1.773	2.167	21.14	16.80	16.06	16.06	7.18	9.17
C_4H_8	0.029	0.026	0.040	0.046	1.082	1.024	5.42	5.83	0.45	0.36	0.21	0.26
C_4H_{10}	0.045	0.032	0.053	0.058	1.086	1.255	8.37	7.22	0.72	0.55	0.32	0.45
C_5H_{10}	0.053	0.065	0.070	0.063	0.629	0.550	2.44	2.80				
C_5H_{10}	0.119	0.144	0.129	0.139	1.121	0.734	2.51	3.45				
Total Gas	0.246	0.267	3.833	3.585	9.368	9.290	100.00	100.00	100.00	100.00	100.00	100.00
Menstruum	99.754	99.733	96.167	96.415	90.632	90.710						
Total Stream	100.000	100.000	100.000	100.000	100.000	100.000						

TEST NO. 2—WITHOUT INTERCOOLERS—WINTER

	Lean Oil		Intermediate Oil		Fat Oil		Wet Gas		Intermediate Gas		Dry Gas	
Components	Measured	Corrected	Measured	Corrected	Measured	Corrected	As Reported	Corrected	As Reported	Corrected	As Reported	Corrected
H_2S			0.241	0.241	0.193	0.199	4.03	4.06	5.16	5.23	4.91	5.02
CH_4 + L*			0.143	0.142	0.157	0.110	19.95	20.65	25.19	25.64	34.02	33.63
C_2H_4			0.093	0.093	0.122	0.084	3.74	3.91	4.82	4.86	5.89	5.80
C_2H_6			0.819	0.788	0.860	0.587	21.97	23.26	28.62	29.82	35.96	33.71
C_3H_6			1.077	1.059	1.168	0.097	9.93	9.30	12.04	12.29	6.96	7.53
C_3H_8			1.538	1.688	2.430	1.800	18.68	17.70	22.67	20.70	11.53	13.49
C_4H_8	0.012	0.012	0.092	0.084	1.706	1.213	6.49	6.61	0.60	0.66	0.29	0.27
C_4H_{10}	0.027	0.021	0.078	0.084	1.768	1.404	8.60	7.75	0.90	0.80	0.44	0.55
C_5H_{10}	0.050	0.065	0.077	0.062	0.950	0.562	2.27	2.69				
C_5H_{12}	0.120	0.126	0.139	0.121	1.140	0.876	4.34	4.07				
Total Gas	0.209	0.224	4.297	4.361	10.494	7.732	100.00	100.00	100.00	100.00	100.00	100.00
Menstruum	99.791	99.776	95.703	95.638	89.506	92.268						
Total Stream	100.000	100.000	100.000	100.000	100.000	100.000						

*Includes N_2 and H_2 indicated by original analyses.

TEST NO. 3—WITH INTERCOOLERS—SUMMER

	Lean Oil		Intermediate Oil			Fat Oil			Wet Gas		Intermediate Gas		Dry Gas	
Components	Measured	Corrected	Measured	Pod on Total Sample	Corrected	Measured	Pod on Total Sample	Corrected	As Reported	Corrected	As Reported	Corrected	As Reported	Corrected
H_2S	0.005	0.005	0.055	0.00	0.055	0.081	0.00	0.082	2.47	2.45	2.81	2.83	3.05	3.22
H_2	0.000	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.39	0.38	0.47	0.45	0.55	0.54
CH_4	0.000	0.000	0.237	0.00	0.239	0.268	0.00	0.267	17.77	17.94	21.54	21.38	27.80	24.91
C_2H_4	0.000	0.000	0.067	0.00	0.068	0.061	0.00	0.060	3.39	3.47	4.25	4.18	4.57	4.79
C_2H_6	0.000	0.000	0.575	0.00	0.563	0.568	0.00	0.583	22.30	21.81	25.43	25.99	27.55	29.12
C_3H_6	0.000	0.000	0.662	0.21	0.693	0.840	0.06	0.876	10.27	9.95	11.84	11.13	9.86	10.56
C_3H_8	0.003	0.003	1.339	0.67	1.334	1.708	0.28	1.657	18.28	18.98	21.04	21.32	21.23	20.21
C_4H_8	0.043	0.097	0.894	0.98	0.895	1.919	1.80	1.920	7.43	7.49	5.02	5.02	2.20	2.69
C_4H_{10}	0.048	0.109	1.169	1.66	1.151	2.133	3.38	2.194	9.37	9.17	6.83	6.93	3.19	3.96
C_5	0.348	0.229	0.437	1.05	0.438	2.268	2.65	2.280	6.37	6.38	0.77	0.77	0.00	0.00
C_6	0.000	0.000	0.441	0.70	0.000	1.298	1.83	0.642	1.96	1.98	0.00	0.00	0.00	0.00
Total	0.447	0.443	5.876	5.27	5.436	11.144	10.00	10.561	100.00	100.00	100.00	100.00	100.00	100.00
Stripped L.O.	99.553	99.557	94.124	94.73	94.564	88.856	90.00	89.439						
Total	100.000	100.000	100.000	100.00	100.000	100.000	100.00	100.000						

TEST NO. 4—WITHOUT INTERCOOLERS—SUMMER

	Lean Oil		Intermediate Oil			Fat Oil			Wet Gas		Intermediate Gas		Dry Gas	
Components	Measured	Corrected	Measured	Pod on Total Sample	Corrected	Measured	Pod on Total Sample	Corrected	As Reported	Corrected	As Reported	Corrected	As Reported	Corrected
H_2S	0.011	0.011	0.051	0.00	0.054	0.104	0.00	0.104	2.67	2.68	2.92	2.79	3.13	3.25
H_2	0.000	0.000	0.000	0.00	0.000	0.004	0.00	0.004	0.45	0.43	1.22	0.46	0.52	0.57
CH_4	0.000	0.000	0.233	0.00	0.242	0.231	0.00	0.228	18.36	18.67	20.75	20.75	24.16	24.50
C_2H_4	0.000	0.000	0.059	0.00	0.060	0.044	0.00	0.044	3.64	3.49	3.96	3.92	4.33	4.57
C_2H_6	0.000	0.000	0.483	0.00	0.479	0.348	0.00	0.351	20.55	20.57	23.01	23.23	26.98	26.57
C_3H_6	0.000	0.000	0.704	0.47	0.682	0.743	0.39	0.717	10.19	10.01	10.56	10.92	10.78	10.64
C_3H_8	0.003	0.003	1.421	1.17	1.424	1.718	1.05	1.733	20.20	20.07	21.09	21.06	20.12	20.11
C_4H_8	0.029	0.028	1.207	1.22	1.177	1.444	1.46	1.500	6.82	6.53	5.92	6.02	2.71	2.73
C_4H_{10}	0.029	0.028	1.401	1.53	1.415	1.572	2.09	1.635	9.33	9.04	9.09	9.12	5.40	5.58
C_5	0.267	0.344	0.546	0.58	0.483	2.225	2.59	1.993	5.51	6.24	1.48	1.73	1.87	1.48
C_6	0.000	0.000	0.000	0.08	0.000	0.740	1.66	0.740	2.28	2.27	0.00	0.00	0.00	0.00
Total	0.339	0.414	6.105	4.97	6.016	9.133	9.24	9.049	100.00	100.00	100.00	100.00	100.00	100.00
Stripped L.O.	99.661	99.586	93.895	95.03	93.984	90.867	90.76	90.951	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.000	100.000	100.000	100.00	100.000	100.000	100.00	100.000	100.00	100.00	100.00	100.00	100.00	100.00

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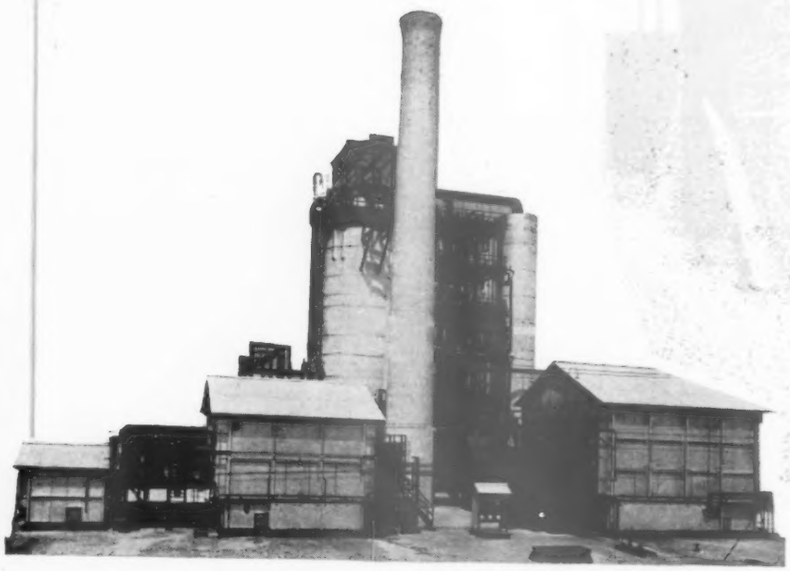

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condensation of heavy components. This was several degrees above the temperature leaving the top section, where the oil was essentially saturated with these light components. With the intercooler no such stripping is indicated, although it doubtless occurred on individual plates in the lower part of the top section of the column.

The effectiveness of the intercooler is evident by the increase from 25.1 to 36.8 in the % absorption of total moles. The use of the intercooler naturally could not affect the recovery of C_4 and C_5, but the absorption of each of the lighter components was increased, and the increase from 54.6 to 73.7% recovery of propane is particularly important. Without the intercooler the absorption was greater in the top section than in the bottom section. With the intercooler the weight of material absorbed was nearly twice as great in the bottom as in the top section. Table 5 shows the heats of condensation to vary accordingly.

Tests 3 and 4 represent similar tests runs under summer conditions, and it is of interest to compare the relative value of the intercooler for summer and winter operation. The summer tests were obtained with about 80% greater gas-oil ratio and with an absorbent oil having a higher molecular weight. With inlet oil at 94.5° F., the total moles absorbed was 16.1% without the intercooler and 19.1% with the intercooler. The percent recoveries of C_3, C_4, and C_5 with the intercooler were 26.9, 72.5, and 100, respectively. Without the intercooler the recoveries of the same components were 24.9, 60.8, and 82.7%.

In terms of total absorption the intercooler was more effective in winter because of lower cooling-water temperatures. In winter the recovery of C_4 and C_5 was high with or without the intercooler, but in summer the recovery of these components was improved considerably by the use of intercooling. The intercooler was much more effective in winter than in summer for increasing the recovery of C_3. The comparative performance with and without intercooling is, of course, dependent on operating conditions. If the total pressure, the oil-gas ratio, or the number of plates had been less, or if the operating temperatures higher, the key components would have been further into the range of more volatile components and the absorption of C_4 and C_5 would have been more notice-

(*Continued on page R-144*)

Table 3. Comparison of Measured Versus Corrected Quantities

Quantities	Test No. 1 —With Intercoolers— Metered	Corrected	Percent Deviation	Test No. 2 —Without Intercoolers— Metered	Corrected	Percent Deviation
Wet gas, lb./hr.	30,789	30,181	—1.98	32,127	31,894	—0.73
Dry gas, lb./hr.	16,061	14,602	—9.08	19,453	19,022	—2.27
Lean oil, lb./hr.	158,004	156,640	—0.86	158,198	158,223	+0.02
Intermediate oil, lb./hr.	161,000	162,031	+0.64	.....	.....	.....
Water to intercooler, lb./hr.	87,419	88,504	+1.24	.....	.....	.....
	Test No. 3 —With Intercoolers—			**Test No. 4 —Without Intercoolers—**		
Wet gas, lb./hr.	57,040	56,605	—0.76	55,280	55,280	0
Dry gas, lb./hr.	38,610	38,900	+0.75	40,340	40,560	+0.55
Lean oil, lb./hr.	158,550	156,480	—1.28	156,970	155,050	—1.22
Fat oil, refinery Absorber, lb./hr.	.....	63,215	.....			
Fat oil, cracking coil Absorber, lb./hr.	.....	174,185	.....			
Fat oil, total, lb./hr.	234,160	237,400	+1.38			
*Intercooler oil, lb./hr.	155,160	164,740	+6.16			
Water to cooler, lb./hr.	78,930	80,600	+2.12			

*Heat balance around cooler using metered water quantity indicates oil rate of 161,100 lb./hr., which is only 2.2% from corrected figure.

Table 4. Summary of Overall Performance

	Test 1	Test 2	Test 3	Test 4
Wet gas, specific gravity	0.968	1.000	1.048	1.036
Rate—std. cu. ft./hr.	403,800	412,600	702,000	695,000
Moles/hr.	1,075	1,099	1,867	1,849
Menstruum—				
Gravity, °API	36.7	36.2	35.4	35.4
Molecular weight	185	188	216	216
Rate—gal./hr.	22,300	22,470	22,050	21,900
Moles/hr.	847	838	730.6	724.2
Lean oil—				
Vapor pressure, mm. at 80° F.	21.7*	11.7*	15.0†	16.0†
Ratio:				
Gal. menstruum/1000 cu. ft. wet gas	55.2	54.5	31.4	31.5
Moles menstruum/mole wet gas	0.788	0.763	0.392	0.392
Operating pressure, lb./sq. in. ga.	77	77	72	72
Temperature °F.—				
Lean oil in	55.5	56.4	94.5	94.5
Intermediate oil out	68.1	....	107	....
Intermediate oil return	48.6	....	92.5	....
Fat oil out	62.0	75.7	103	110
Wet gas in	41.8	40.2	79	80
Dry gas out	56.3	58.7	102	104
Moles of gas absorbed/Hr.—				
Top of tower	154	186	197.2	212.9
Bottom of tower	241	90	158.9	84.1
Total	395	276	356.1	297.0
Moles Absorbed/Mole of Menstruum				
Top of tower	0.182	0.221	0.270	0.294
Bottom of tower	0.285	0.107	0.217	0.116
Overall	0.467	0.328	0.487	0.410
Moles absorbed/mole wet gas—Overall	0.368	0.251	0.191	0.161

*Lean oil not completely stripped: consists of 0.3 wt. % $C_5 + L$ and 99.7 wt. % menstruum.

†Lean oil not completely stripped but consists of 0.4 wt. % gas + 99.6 wt. % menstruum.

Table 6. Recoveries Expressed as Percent of Component in Wet Gas

Components	Test No. 1 —With Intercooler— Bottom Section	Top Section	Overall	Test No. 2 —Without Intercooler— Bottom Section	Top Section	Overall
H_2S	17.4	19.3	36.7	—4.4	30.7	26.3
CH_4+L	11.2	2.9	14.1	—0.7	3.5	2.8
C_2H_4	7.1	15.5	22.6	—0.8	12.3	11.5
C_2H_6	8.1	23.7	31.6	—4.0	17.6	13.6
C_3H_6	35.5	39.8	75.3	—7.2	58.9	51.7
C_3H_8	36.7	37.0	73.7	5.2	49.4	54.6
C_4H_8	95.9	1.9	97.8	91.8	5.6	97.4
C_4H_{10}	95.2	2.0	97.2	91.9	4.2	96.1
C_5	100.0	0.0	100.0	100.0	0.0	100.0
Total gas Mole %			36.8			25.1
	Test No. 3 —With Intercooler— Bottom Part of Tower	Top Part of Tower*	Overall	**Test No. 4 —Without Intercooler—** Bottom of Tower	Top of Tower*	Overall
H_2S	3.82	5.91	9.73	6.02	4.78	10.80
H_2	0.00	0.00	0.00	2.95	0.00	2.95
CH_4	0.72	3.87	4.59	0.00	3.75	3.75
C_2H_4	—0.36	5.69	5.33	—1.25	4.14	3.89
C_2H_6	0.71	7.52	8.23	—1.68	6.93	5.25
C_3H_6	6.80	20.27	27.07	1.75	20.25	22.00
C_3H_8	6.41	20.40	26.81	5.43	21.07	26.50
C_4H_8	44.16	31.20	75.35	16.95	52.55	69.30
C_4H_{10}	37.06	33.26	70.32	9.04	45.66	54.70
C_5	88.97	10.03	100.00	75.20	7.45	82.65
C_6	100.00	00.00	100.00	100.00	0.00	100.00
Total gas Mole %	8.50	10.55	19.05	4.55	11.51	16.06

*Based on wet gas.

Table 5. Heat Balances

	Test No. 1 B.t.u./Hr.	Per Cent	Test No. 2 B.t.u./Hr.	Per Cent	Test No. 3 B.t.u./Hr.	Per Cent	Test No. 4 B.t.u./Hr.	Per Cent
Heat Input								
Heat of Condensation								
Bottom of tower	1,608,000	63.5	775,000	40.2	1,268,000	49.8	703,000	33.3
Top of tower	925,000	36.5	1,154,000	59.8	1,275,000	50.2	1,407,000	66.7
Total	2,533,000	100.0	1,929,000	100.0	2,543,000	100.0	2,110,000	100.0
Heat Output								
Sensible Heat Picked Up								
Lean oil								
Menstruum	456,000		1,376,000		634,000		1,144,000	....
Gas in lean oil	2,000		4,000		3,000		5,000	....
Dry gas	106,000		173,000		389,000		420,000	....
Intercooling								
Menstruum	1,366,000		0		1,138,000		0	....
Gas in int. oil	99,000		0					
Absorbed gases	365,000		176,000		168,000		205,000	....
Heat losses (by diff.)	139,000		200,000		211,000		336,000	....
Total	2,533,000		1,929,000		2,543,000		2,110,000	....

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Abstracts from Current Literature

"Influence of Sulfur Compounds Upon Octane Number and Lead Susceptibility of Gasoline"

By Julian G. Ryan, Shell Oil Co., Wood River, Ill.; Presented before the Division of Petroleum Chemistry, American Chemical Society, Memphis, April 21.

This work makes it possible to calculate from chemical analysis of the gasoline the effect of various sulfur compounds upon the response of the gasoline to tetraethyl lead. Some compounds were found to have a more detrimental effect than others upon octane number in the presence of ethyl fluid, that of "polysulfide" sulfur, for example, being 12 times that of an equal concentration of "thiophene" sulfur.

This study also brought out the pronounced effect on lead susceptibility of minute quantities of sulfur. One-tenth of 1% of "disulfide sulfur", a form present in many finished gasolines, reduced the effectiveness of ethyl fluid by 47%, and the effect of 0.001% was found to be 9%. In order to realize the full advantage of sulfur removal, it is, therefore necessary to reduce the sulfur content to a very low level, the author states.

In calculating the lead response of a blend of two or more gasolines of known sulfur content and lead response, it was found that a blend of high and low sulfur gasoline always shows a poorer lead response than the average of the two tested separately. Waste of tetraethyl lead, it is pointed out, can be avoided by the choice of blending materials in accordance with the principles established in the paper.

* * *

"Oxidation Characteristics of Lubricating Oils and Relation between Stability and Chemical Composition"

By G. H. von Fuchs and H. Diamond, Shell Oil Co., Wood River, Ill.; Presented before Division of Petroleum Chemistry, American Chemical Society, Memphis, April 21.

It is shown that the stability, of resistance of an oil to oxidation, depends upon its composition, particularly its components of aromatic compounds. An intermediate amount of aromatic material was found to provide greatest stability, the authors stating that, if the right amount of the right kind is left in a lubricant for internal combustion engines and allowed to oxidize, the first products formed protect the rest of the oil, thus deterioration is kept at a slow rate throughout the life of the oil. The practical significance in wartime of increasing the ability of lubricants to withstand oxidation is seen in the fact it is impossible to change oil at predetermined intervals in engines and turbines powering crucial military and naval equipment.

* * *

"Isolation of Sulfur Compounds from California Straight-Run Gasoline"

By W. E. Bradley, O. L. Polly and A. C. Byrns, Union Oil Co. of California, Wilmington, Calif.; Presented before Division of Petroleum Chemistry, American Chemical Society, Memphis, April 21.

This investigation had as one of its objectives the study of fields of usefulness for sulfur compounds isolated or derived from petroleum fractions, it being recognized that refiners are potential large producers of a wide variety of organic sulfur compounds, although their chief interest to date has been in the most practical manner of removing these "objectionable" compounds from gasoline fractions and other stocks.

It is noted that sulfur compounds of various types have been found of considerable value in the manufacture of pharmaceuticals and in rubber production. Consequently, attention is being given to the possible utilization of the sulfur compounds derivable from petroleum in the production and reclaiming of rubber and synthetic rubber. A process for selectively extracting thiophanes from gasoline distillates has been devised and several of the compounds present in the extract separated and identified. A number of fractions of the crude extract are under investigation as possible rubber reclaiming solvents.

Another objective in the investigation was the study of the effects of thiophanes and other sulfur compounds on the lead response of gasoline stocks used in the preparation of 91- and 100-octane aviation gasoline. This information is of value in determining the amount of sulfur compounds which can economically be removed in order to obtain maximum production of aviation fuels.

The study included the removal and identification of sulfur compounds, other than mercaptans, known to occur in relatively large amounts in certain crudes, among them those in Santa Maria Valley, Calif.

* * *

"Flow of Natural Gas in Pipe Lines"

By E. N. Kemler and N. Kulik, School of Mechanical Engineering, Purdue University; Presented before Eastern District A.P.I. Division of Production, Pittsburgh, April 10, 1942.

The chief problem encountered in designing new lines or modification of existing lines to utilize their capacty to the fullest extent, is selection of the friction factor to be used in determining pressure drop. The paper reviews available data on friction factors as determined on gas pipe lines and on the flow of gas through pipes and outlines a simplified method for determining pressure drop.

Two sets of conditions encountered in making pressure drop calculations are recognized. The first is where the pipe size and surface remain essentially the same as when installed. Here friction factor data based on laboratory test can be applied satisfactorily, it is stated. The second type of condition is where the pipe surface or the effective inside diameter is changed with use, as where the deposition of material occurs, or where chemical reaction takes place and deposits occur. Formulas applicable to the second set of conditions are given, both for determining pressure drop and for determining volume rate of flow if the pressure drop is known.

* * *

"A New Method for the Determination of Equivalent Cracking Conditions for Cracking Reactions"

By S. L. Neffe; Journal of the Institute of Petroleum, February, 1942.

The method is for correlation of temperature and time conditions during commercial cracking operations. Influence of pressure is considered negligible and is disregarded in the discussion, since pressure during a run is generally kept aproximately constant and variations are mainly in temperature and time of cracking. A straight-line relationship is shown to exist between temperature and the factor for which the velocity of cracking is doubled and an equation is presented for defining the relation between time of cracking and temperature, under constant pressure, for a definite yield of product.

A chart is presented which the author states is useful for determining graphically the equivalent cracking conditions of any operation over a fixed period, with varying cracking conditions, including coming on and off stream, variations in temperature due to endothermic nature of cracking reactions in general, or variations due to other causes, such as changes in furnace firing conditions.

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Performance of Refinery Gas Absorbers

(*Continued from page R-140*)

ably improved by the use of intercooling. Under such conditions the increase in percent total absorption would also have been more pronounced.

(The portion of the paper which is omitted is a comparison of the observed data with calculated absorber performance, and serves as a check on published design procedures. To make the comparison, a sample calculation of an absorber design is presented for the conditions in Test No. 1 (winter with intercooling). Plate efficiencies used are estimated by the equation of Walter and Sherwood[4], equilibrium data[3] is based on the Lewis fugacity chart, and the general method of calculation used is as estimated by one of the authors[4]. Similar calculations were made for the conditions of Test 2 (winter without intercooling).

In general the comparisons were said to show good agreement between observed and calculated gas analyses and percent absorption of each component. Principal discrepancy was in Test 1, in the case of methane, where the actual absorption was 3 times the calculated. The difference between calculated and observed absorption in Test 2 was greater, since tower temperatures covered a wider spread.)

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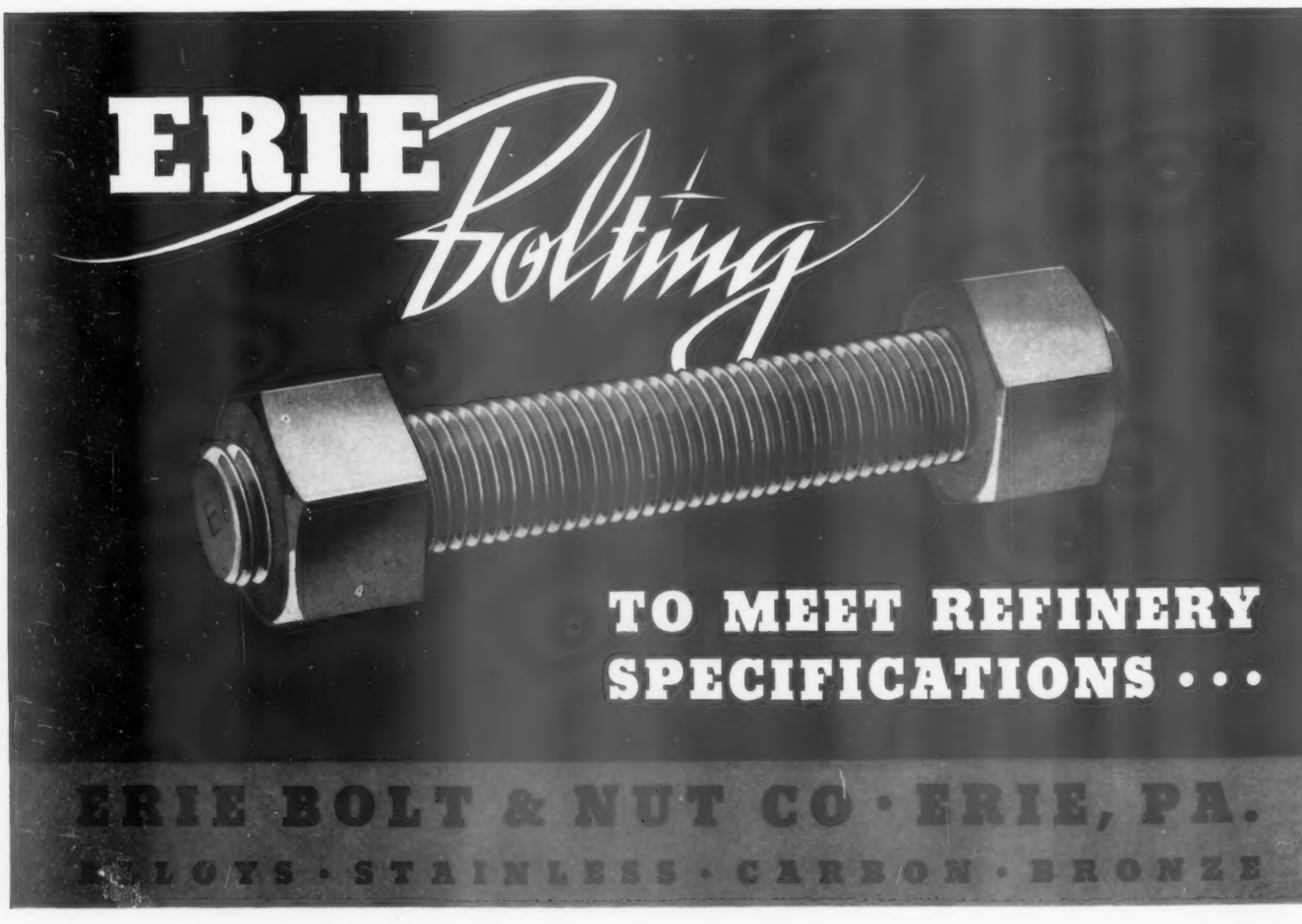


OPC's May Recommendation Slashes Production Quotas

NPN News Bureau

WASHINGTON — Reflecting the critical transportation situation—from the Gulf Coast region in particular—Petroleum Co-ordinator Ickes on Aprill 22 recommended 192,000 bbls. less daily production for all petroleum liquids during May than in April. Recommended daily rate of production in May has been set by OPC at 3,474,500 bbls. compared with 3,666,800 the previous month.

Bureau of Mines forecast a May demand of 3,729,000 bbls. daily for crude alone.

"The further reduction in the production rates is but a reflection of the increasing seriousness of the problem of transporting oil from where it is produced to the important consuming centers of the nation, principally along the Eastern Seaboard," Mr. Ickes said in announcing May quotas.

Following are recommended production rates for May as compared with previous month and with actual May production a year ago:

Recommended Production Rates

Barrels Per Day

District and State	May 1942 Total Petroleum Liquids	April 1942 Total Petroleum Liquids	May 1941 Actual Production (Crude Oil)
District I			
New York	14,800	14,600	14,400
Penna.	50,500	49,900	44,200
W. Va.	17,100	15,200	11,900
Total	82,400	79,700	70,500
District II			
Illinois	329,200	354,400	375,100
Indiana	17,900	18,200	20,000
Kansas	259,300	253,400	239,300
Kentucky	12,800	12,800	11,900
Michigan	60,500	60,200	34,100
Nebraska	4,500	5,000	4,200
Ohio	10,200	10,100	8,800
Oklahoma	438,500	436,900	465,900
Total	1,132,900	1,151,000	1,159,300
District III			
Arkansas	74,000	74,000	77,200
Louisiana	298,600	313,000	327,500
Mississippi	48,100	49,800	18,900
N. Mex.	73,300	86,000	116,500
Texas	960,000	1,134,000	1,376,000
Total	1,454,000	1,656,800	1,916,100
District IV			
Colorado	7,900	6,900	2,400
Montana	25,200	23,700	19,500
Wyoming	98,300	88,900	72,800
Total	131,400	119,500	94,700
District V			
California	673,800	659,800	675,200
Total U. S.	3,474,500	3,666,800	3,916,000

Texas Gets Big Cut

"Despite the recent amazing increase of tank car shipments made possible by the splendid efforts of the railroads and the oil companies," he added, "it just is not possible, in present circumstances, to satisfy the total crude oil demand forecast by the Bureau of Mines." (Tank car movement eastward during week ended April 18 was reported as 599,500 bbls. daily).

Texas will suffer the largest slash, from a daily production of 1,134,000 bbls. during April down to 960,000 bbls. daily proposed for May.

"Texas is more dependent on ocean tanker transportation than the other producing states," Mr. Ickes explained.

District 2 Quotas Down

District 2 producing areas will dip downward to a daily figure of 1,132,000 bbls. during May as compared with 1,151,000 bbls. daily during April, which, OPC says, reflects the decrease in productive capacity of the Illinois oil fields.

On the other hand, District 1 producing states will pick up 2700 bbls. daily during May. District 4 (Rocky Mountain area) will take a jump up of 11,900 bbls. daily, to help augment Pacific Northwest petroleum supplies—to be moved in by tank car from District 4. A slight adjustment upward for California is recommended which "represents the increased military requirements from that area".

Arkansas Sets Quota For May Production

Special to NPN

EL DORADO — Arkansas' crude production allowable for May has been set at 72,269 bbls. daily, 1416 bbls. under April allowable and 1731 bbls. below recommendation of Office of Petroleum Co-ordinator. New wells coming into production are expected to increase total production to amount set by OPC.

Texas Holds Up May Order, Hoping for Revised Quota

AUSTIN—Half the state's 6300 independent operators will go bankrupt if federal officials insist on slashing Texas May production to 960,000 bbls. daily—a 20% cut. Commissioner Olin Culberson said April 27.

Special to NPN

AUSTIN — Texas Railroad Commissioner Jerry Sadler has returned from Washington with some "slight hopes" of getting Petroleum Co-ordinator Ickes to change his mind about a drastic cut in Texas allowable for May.

Mr. Sadler and Commissioner Olin Culberson flew to Washington within a few hours after receiving Office of Petroleum Co-ordinator's recommendation for a Texas production not to exceed 960,000 bbls. daily for May. This is around 200,000 bbls. daily less than April.

Spent 2 Days at OPC

"We spent two entire days making pleas for relief to help the producer and the working man, and we have some slight hope of immediate relief," Mr. Sadler said upon his return April 25.

At any rate, the two commissioners have sufficient hope the figure will be changed that the commission will hold up issuing the May proration order until it hears further from Washington. For the remainder of April, Texas is operating under the federal estimate of 1,160,623 bbls. daily.

The commission, along with most oil men, were appalled by the OPC's recommendation for May.

Already, most Texas wells are shut down 18 days out of the month due to the cuts ordered for April, and Texas production has shrunk to the lowest ebb since the discovery of the East Texas oil field.

The OPC recommendation of 960,000 bbls. came on the heels of the statewide proration hearing, where purchasers made sworn statements that they had a firm market for a total of 1,512,000 bbls. daily.

If the 960,000-bbl. figure sticks, the commission probably will add more shutdown days for May, since that is the method it has taken in the past of curtailing production.

One witness at the proration hearing urged the commission to allow the industry to fix its own shutdown days, saying that arbitrary days worked a hardship on the operators. The commission, however, has given no indication that this will be done.

May Oil Allowables Set By Louisiana

Special to NPN

BATON ROUGE — Louisiana May allowables total has been set at 301,929 bbls. daily, 3329 bbls. over recommendation of Office of Petroleum Co-ordinator and 20,537 bbls. below April allowable. OPC's recommendation was 298,600 bbls. daily, a cut of 14,400 bbls. from April.

Of this total, North Louisiana fields were allocated 76,527 bbls. and South Louisiana, 225,402 bbls.

Ratner Urges OPC To Hike Allowable

Special to NPN

TOPEKA — Kansas' Gov. Payne Ratner late the week of April 20 requested Office of Petroleum Co-ordinator to reconsider its recommendation of 259,300 bbls. daily for state's May production. Request was in a wire to Co-ordinator Ickes.

April 20, two days before OPC announced its recommendations, Gov. Ratner wired OPC suggesting Kansas could help alleviate shortage of crude in the Great Lakes area and Canada by producing 50,000 bbls. daily more than April allowable, the additional crude to be transported to the Chicago area by present transportation facilities. This could be done, he wired, without waste or undue exhaustion of potential reserves. OPC recommended only 5900 bbls. increase in May quota.

Asks Reconsideration

In his last wire to Mr. Ickes Gov. Ratner said: "I feel that undoubtedly this determination of the May allowable for Kansas was made before you received my message. I trust that this order for May is not necessarily final and that in view of what I have submitted (in wire of April 20) it may be possible for you to reconsider the Kansas allowable for May and raise the figure to approximately 50,000 bbls. above the April figure. Kansas stands ready to be helpful in the war emergency and I am glad to offer our co-operation in every way possible toward relieving this war shortage of crude oil."

'Deepest Well' in Texas Completed by Superior

Special to NPN

HOUSTON—Superior Oil Co. (California) has completed near here the deepest producer in Texas and the second deepest in the world.

In the Lake Creek field of Montgomery County, Superior's No. 1 South Texas Development Co. made 213 bbls. of 52 gravity distillate and 3,000,000 cu. ft. of gas daily through a 15/64-in. choke from perforations at 11,775 to 11,815 ft. in the Wilcox formation.

The field produces gas-distillate which is credited with having a high octane number. Superior has been given priority ratings for materials, but has not yet received final approval from the government for a large recycling plant in the field.

OPC Moves to Halt Well Abandonment

NPN News Bureau

WASHINGTON — To obtain the maximum recovery of crude oil and gas in the U. S., no oil or gas well is to be abandoned "unless and until such well is incapable of yielding a sufficient production of oil or gas", Office of Petroleum Co-ordinator's Recommendation No. 47 states. This was signed April 21 by Petroleum Co-ordinator Ickes.

Notice of intent to abandon a well producing more than 1 bbl. of crude or 6000 ft. of natural gas daily, must be filed with the district production director in whatever district well is located, at least 30 days prior to abandonment.

Oil and gas wells may be abandoned if such wells are "actually incapable of production because of deletion of the reservoir or because of failure to find oil or gas in commercial quantities."

Must Salvage Casing

However, such abandonment, recommendation says, must be in conformity with the procedure prescribed by state regulatory bodies, or where there are no such bodies, in conformity with "recognized engineering principles".

Casing or equipment is not to be salvaged for any well except where abandonment is approved, "if such action will cause or result in the isolation and loss of the remaining reserves of the particular reservoir", recommendation adds. Moreover, "prompt use" must be made "of the material and equipment salvaged as a result of the abandonment".

This recommendation was approved by Assistant Attorney General Thurman Arnold (*full text of recommendation and Arnold's letter will be published in OIL-Law-GRAM—Ed.*).

Wording of Prohibition

Exact wording of the abandonment prohibition follows:

"No oil or gas well shall be abandoned unless and until such well is incapable of yielding a sufficient production of oil or gas, or both, to provide adequate compensation for the labor employed in its operation, to meet maintenance and repair costs, and to pay such taxes as may be levied against it; provided, however, that any oil or gas well may be abandoned where the production of water from such well tends in any way to diminish the ultimate recovery of petroleum from the particular reservoir."

M-68 Applications Clarified by OPC

NPN News Bureau

WASHINGTON — Applications for exceptions to Conservation Order M-68 are preferred "for a field as a whole", according to Deputy Petroleum Co-ordinator Davies.

"In the past," Mr. Davies said, "applications involving specific properties within a pool have been presented and considered by this Office, and occasionally approval recommended to and granted by the War Production Board. Individual applications will continue to be considered. But it is obviously preferable when exceptions are requested for a field as a whole."

An appeal also has been issued, Mr. Davies said, at the suggestion of the National Conference of Petroleum Regulatory Authorities, to the petroleum regulatory agencies of the oil-producing states "to assist in the formulation of oil field development and production programs that will be of maximum benefit to the war effort." (*See NPN April 15, p. 25*).

Suggests 'Closer Study'

Mr. Davies also said:

"Often, a closer study of the provisions of M-68 by a group representing the operators in a field and the state regulatory body may disclose a plan of procedure that will conform fully with the Order and eliminate the need for an exception. In other instances, the operators may avail themselves of the technical assistance of the regulatory agency in preparing an application for exception to the Order that will present such a strong case in favor the proposed exception that approval will be expedited."

House Committee Urged To Continue Depletion

NPN News Bureau

WASHINGTON — Revenue to be gained through abandonment of the established provisions of percentage depletion and intangible drilling costs "is far too small to compensate for any threat to our petroleum supremacy, particularly during a period of national emergency", Russell W. Brown and J. C. Hunter, co-chairmen of the General Depletion Committee for the industry, said in a statement filed with the House Ways and Means Committee.

Loss Doesn't Void Commission Order, Texas Court Holds

Special to NPN

AUSTIN — Just because an order of the Texas Railroad Commission causes an operator to lose money, the order is not void, the Third Court of Civil Appeals held here in considering an appeal on a year-old case.

The decision reversed a district court injunction granted to the AWOEB Oil Co. restraining the commission from enforcing its May, 1941, proration order in the Minnie Bock field.

"Any order of the commission limiting density of drilling, daily allowable per well, or controlling storage, transportation, and marketing necessarily affects property values and profits from production of oil," the opinion read. "But, this is necessarily incident to the police power of the state to regulate any business affected with public interest, so long as it treats all alike."

Jobber Cures 'Tire Jitters' With Prize Contests

W. H. Pugh Oil Co., Racine, Wis., is calming the "tire jitters" and encouraging motorists to get more tire mileage than ever by running local contests, with first prize (250 gal. of gasoline) going to the car owner who produces tires with the greatest length of service in number of miles. Second prize is 150 gal. of gasoline and third place, 100 gal. Pugh Oil's contest is designed to "bring 'em in" to the company's "friendly stations" and is being plugged through a series of newspaper advertisements like the one below

HOW DID *YOU* DO IT?

Your Tire Saving Plan May Win a Prize

Here's How to Enter:

1. Stop at the nearest W. H. Pugh Friendly station for a "Tire Mileage affidavit.
2. Fill it out stating the miles your tires have travelled and what special method, if any, you employed to get this mileage. Sign it before one witness.
3. The tires with the greatest length of service, in miles, will win 500 gallons of gasoline for their owner. Second place will win 300 gallons of gasoline and third place 200 gallons.
4. In the event of a tie, duplicate prizes will be awarded. Decision of the judges will be final. All entry information relative to tire saving becomes the property of the W. H. Pugh Oil Company. Contest closes at midnight June 10th, 1942.

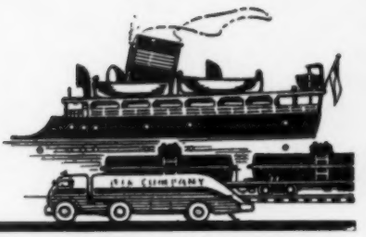
In the interest of conserving rubber and in lengthening the life of cars essential to defense workers, the W. H. Pugh Oil Company wants to know how YOU have secured more than average mileage from your automobile tires. IF YOU KNOW HOW TO MAKE TIRES LAST LONGER and have done so successfully on your car, enter the Pugh "Tire Mileage Contest" NOW.

W. H. Pugh FRIENDLY STATIONS

Here's Where to Enter:

17th & Racine St.
17th & Taylor
1149 Washington Ave.
1304 Douglas Ave.
516 Wisconsin Ave.
Douglas and Rapids Dr.
Hotel Racine Auto Park
North Main at Dodge
14th at Washington Ave.

Oil TRANSPORTATION



OPC Studies Wooden Barges To Bring Fuel Oil Eastward

NPN News Bureau

WASHINGTON—Anticipating the time when "we may reach the point where we will have no tankers", Petroleum Co-ordinator Ickes told his press conference April 23 that his office is studying plans to bring fuel oil to East Coast by wooden barges on inland waterways.

Moreover, the Office of Petroleum Co-ordinator is also studying means of getting steel barges to carry lighter oil products, Mr. Ickes said, pointing out that use of wooden barges for the lighter, more volatile petroleum products would be an "invitation to sabotage". Wooden barges, say other authoritative sources, are about 20% heavier than steel; would be slower.

OPC is also studying ways of drawing more tank cars from Mid-West for hauling crude and products to the East Coast. Total of 44,000 tank cars are now being used in the East Coast oil service, the Co-ordinator said.

Ask Higher Prices

Transportation of oil to the East Coast by means other than tankers is costing oil companies $300,000,000 yearly and OPC has asked Price Administrator Henderson for increased prices to compensate for these losses. Mr. Ickes said.

From another high OPC official, it was learned that OPC has told the Office of Price Administration that if refinery yields are to be changed so as to produce more fuel oil, that increased prices are a "must". Moreover, it was said, OPA is "listening favorably".

Lack of adequate transportation to East Coast may result in gasoline being turned back into the ground, in refinery areas, Mr. Ickes said. OPC's Refinery Director Wright W. Gary voiced a similar opinion the following day before a Senate investigating subcommittee. Mr. Gary added that the gasoline might have to be burned if adequate transportation couldn't be found.

A locomotive shortage, in West Virginia, caused 10 coal mines to be shut down for a day, Mr. Ickes said.

If the defunct Supply Priorities and Allocations Board and the Office of Production Management had allocated sufficient steel last fall for the proposed 1580-mile crude line from East Texas to the New York-Philadelphia areas, this line would now be bringing approximately 350,000 bbls. of crude daily in the eastern area, the co-ordinator said.

Renew Pipeline Plea

He added that OPC will renew its application for the necessary steel plate to build this 24-in. crude line.

Mr. Ickes said OPC may recommend deeper gasoline curtailment by May 1 than present 33 1/3% cut. East Coast gasoline situation is "not as well in hand" as it was when first cut was made.

If gasoline stocks at East Coast service stations disappear before May 15 (date OPA's temporary gasoline rationing plan is effective) due to a run on them by motorists, "this doesn't mean that after May 15 there will be a continued scarcity", Mr. Ickes said. He refused even to speculate on number of gallons to be allowed "non-essential" motorists.

Asked about his recent conversations with Canadian Oil Controller George R. Cottrelle, Mr. Ickes only replied that he and Mr. Cottrelle should be in "more frequent touch".

McLaughlin, Cowles Appointed to OPC

NPN News Bureau

WASHINGTON—Appointment of R. B. McLaughlin, Houston, Tex., as Associate Director of Transportation was announced on April 24 by Deputy Petroleum Co-ordinator Ralph K. Davies who also announced the appointment of Lee R. Cowles, Chicago, Ill., as Assistant Director of Transportation.

Mr. McLaughlin is vice-president and assistant manager of both the Texas Pipeline Co. and the Texas-New Mexico Pipeline Co. He was born in Fredonia, Pa.

Mr. Cowles is traffic manager of Standard Oil Co. of Indiana.

Tank Truck Tonnage Up 78% in March

NPN News Bureau

WASHINGTON — Accounting for almost 10% of the total tonnage carried by highway during March, tank trucks increased their tonnage 78.1% over March a year ago and 18% over February 1942, according to American Trucking Assns., Inc.

These figures are based on comparable reports received by A.T.A. from 222 motor carriers in 42 states, which reported an aggregate of 1,622,801 tons in March, as against 1,485,043 tons previous month and 1,450,657 tons during March a year ago.

Rail Hauls to East Near 600,000 Bbls.

NPN News Bureau

WASHINGTON—Within whispering distance of the 600,000-bbl. mark, rails moved 599,500 bbls. daily of crude and products into the East Coast area in week ended April 18, Office of Petroleum Co-ordinator announced.

Shipments into the Northwest also jumped—up to 23,980 bbls. daily.

Twenty companies reported loading 18,651 tank cars for East Coast, as follows:

American Mineral Spirits Co., 111 cars; Arkansas Fuel Oil Co., 139; Atlantic Refining, 2023; James B. Berry Sons, Inc., 8; Cities Service, 768; Conoco, 163; Gulf, 1369; Hartol, 109; Pan-American, 1288; Petrol Corp., 370; Petroleum Heat & Power Co., 76; Pure, 176; Shell, 1159; Sinclair, 1435; Socony-Vacuum, 2529; Kentucky Standard, 147; New Jersey Standard, 3284; Sun, 1067; Texaco, 2053; and Tide Water, 377.

Number of cars by products: Crude—7699; gasoline—4326; kerosine—1287; gas oil and distillate fuel oils—1722; residual —3076; lube oils—171; asphalt —150; naphtha — 150; l.p.g—9; wax—10; and others—51.

Companies in Northwest movement loaded 746 cars as follows:

General Petroleum, 58 cars; Richfield, 50; Shell, 218; California Standard, 187; Texaco, 46; Tide Water, 97; and Union, 90.

FDR Calls Confab To Study Effects Of Trade Barriers

NPN News Bureau

WASHINGTON — President Roosevelt has called a conference here on May 5, 6 and 7 on interstate trade barriers, inviting state governors to send representatives to the meeting.

In a telegram to the governors on April 25, he said war agency heads would discuss the hampering effect of trade barriers on the war.

Meantime, Sen. Andrews, Fla., introduced a bill giving the President authority, through any agency he might designate, to set maximum size and weight limits on trucks. The law would remain on the statute books for 6 months after termination of the war.

Urge Uniform Laws

Down in Hot Springs, Ark., the Southern Governors Conference, in executive session, adopted a resolution for appointment of state committees to work toward complete and unlimited reciprocity on license plates and to establish regional uniformity of maximum sizes and weights thus:

Width, 96 in.; height, 13 ft.; length, 35 ft. for trucks and 45 ft. for tractor semi-trailer units; weight, 18,000 lbs. per axle, with gross weight of 30,000 lbs. for 2 axles and 40,000 lbs. on tractor semi-trailer combinations.

Highway Tax Diversion Hit

Special to NPN

EXETER, R. I. — Stand in favor of a constitutional amendment dedicating state highway funds to highway purposes only was reaffirmed by the Rhode Island Highway Assn. at its spring meeting here last week. A resolution to this effect is now in the Special Legislative Committee of the House.

John A. Bennett, legislative counsel of the Rhode Island State Grange, speaking at the meeting said: "Even in peacetime our Rhode Island highways have not been adequately maintained. How could they be, since we have been diverting 50 per cent of our entire highway revenue, or an amount equivalent to the entire collections of the state gasoline tax.

At Braniff Airways field, Kansas City airport—2" Red Seal Meter, Model 211, Round Dial, on duty at loading rack... metering accurate fills to refueling tank truck.

Refueling by meter... on T

PASSENGERS EXPRESS MAIL

BRANIFF AIRWAYS

BRANIFF
THE LINE
Airways

BRANIFF BUILDING
OKLAHOMA CITY
OKLAHOMA

January 22, 1942

Mr. Ira T. Collar, Jr.
Neptune Meter Co.
2107 Grand Avenue
Kansas City, Mo.

Dear Mr. Collar:

Our dispatcher at the Kansas City airport has sent us a number of photos showing your 2" Red Seal Meter on the loading rack at our storage tank. The shots seem quite interesting, so I am enclosing the prints - in case you wish to look them over.

This meter serves two purposes. It keeps a running check on the amount of gasoline dispensed to the refueling trucks for bookkeeping purposes, and assists the driver in his loading operations to take on only as much fuel as is needed. This is quite important as you can realize that evaporation losses in handling aviation gas are high and the less it is exposed to being handled and shaken up, the better.

We are pleased to be able to tell you that this meter is working out very well. It is giving excellent service.

Very truly yours,

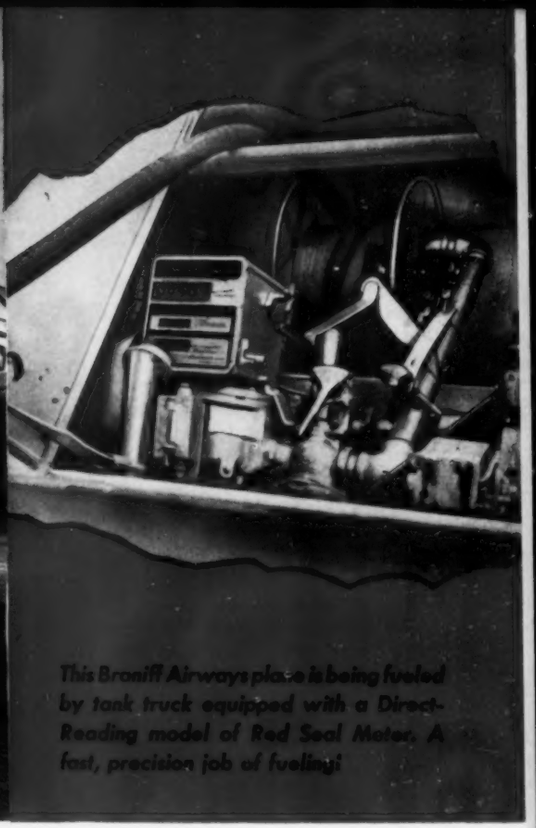
Charles Johnson
Superintendent of Maintenance

AIRPORTS have their own special problems of gasoline-handling in plane refueling operations. There are special reasons, too, why *modern metering* has an approved place in the technique of whatever refueling system may be employed.

Where planes are serviced from refueling tank trucks—and these refuelers in turn draw their supply of aviation gasoline from bulk storage tank, meters can be used to advantage on both the loading stand at the storage tank and on the refueling trucks themselves.

(1) Metering actually influences the quality of the aviation gasoline that goes into the plane's tanks. The driver of the refueling truck can take on a fill just large enough to meet his immediate fueling purposes.

NEPTUNE



This Braniff Airways plane is being fueled by tank truck equipped with a Direct-Reading model of Red Seal Meter. A fast, precision job of fueling!

...on the Airways

This means less handling and fluid agitation, consequently reduced evaporation—especially of those volatile constituents which give aviation gasoline its extra power.

(2) A reduction in evaporation losses of course represents a money-saving. Wasteful spillage also is avoided or cut to a minimum by metering.

(3) Metered fills from loading stand and metered deliveries from refueling truck afford much *faster* truck loadings and unloadings than are possible by the "eye" method. Speed in plane refueling operations often is essential.

(4) The meters' accurate check on gallonage dispensed is a valuable aid to bookkeeping and inventory. Unaccounted-for gallonage is eliminated.

Neptune Red Seal Meters are veterans of airport service. They offer a wide range of adaptable types in round dial and direct-reading meters.

All have earned a reputation for speed and accuracy in gasoline measurement and delivery. Maintenance labor and expense are negligible . . . the meter itself has only one moving part. The registers — equipped with totalizers — are designed for clear visibility in reading. Durability and long life of the meters have been proved under all conditions of field service.

But why not discuss with your nearest Neptune office this whole matter of refueling by meter and its manifold benefits? Considerable flexibility in method and type of equipment is offered.

●

NEPTUNE METER COMPANY: 50 West 50th Street, New York. Branches at Atlanta, Boston, Chicago, Dallas, Denver, Kansas City (Mo.), Los Angeles, Louisville, Philadelphia, Portland (Ore.), San Francisco, and at Long Branch, Ont. (near Toronto).

...ERED SEAL METERS

Gasoline Dispensing Pumps — Meters for: Barge and Tank Car Unloadings • Storage Transfers • Loading Racks • Delivery Tank Trucks.

NEPTUNE RED SEAL METER CO.

1846

Order Cut in Local Delivery Mileage; Tank Trucks Included in ODT Edict

NPN News Bureau

WASHINGTON—All local deliveries, including tank truck deliveries to filling stations and consumers are to be drastically curtailed beginning May 15 and a 25% reduction must be made in local delivery mileage commencing June 1.

General Order No. 6 of Office of Defense Transportation so ordered on April 20. The order, which includes tank trucks, was made public April 23.

The order stipulated that not more than one delivery a day could be made to any one person or business establishment, that no special deliveries are to be made, and that no call-backs are to be made.

Calls for 25% Cut

On top of those mileage reductions, local carriers are to reduce total mileage 25% below that of the corresponding month a year ago. If the company was not in business a year ago, May is to be used as the base month.

ODT General Order No. 6 was issued simultaneously with Orders 3, 4 and 5 which was accompanied by a statement from ODT Director Eastman that the tire regulations are to be amended, effective June 1, so that a truck operator will not be able to obtain a tire certificate if he has deliberately run his tires beyond the point of renewal or by over-loading them.

The other 3 orders, said officially to exclude tank trucks, provided for outright pooling of common carriers and limited pooling of contract carriers, but did not call for joint private carrier action because of danger of violating Interstate Commerce Act.

In general, the orders provide that the most direct routes are to be used, trucks are not to be loaded more than 120% of tire-rated capacity, out-bound trucks must be loaded to capacity and loaded to 75% of capacity on return trips.

To Remove Charge On Empty Mileage

NPN News Bureau

WASHINGTON—After May 1, tank car users may move cars a longer distance empty than loaded without paying an excess empty mileage freight charge.

Announcement was made April 24 by Office of Defense Transportation which said railroads, at request of ODT's Tank Car Service Committee, had filed a tariff with Interstate Commerce Commission relieving tank car owners of the empty mileage penalty. ODT said the tariff is effective May 1.

ODT explained that railroads levy a freight charge for every mile a tank car travels unloaded in excess of the miles it travels loaded. Normally the mileage can be equalized, but the emergency rail movements of petroleum to the East Coast has caused tank car users to incur large penalty charges.

Loss of Tanker Sailors' Lives Cited In Appeal by U. S. for Less Driving

NPN News Bureau

WASHINGTON—Sailors will not be asked to risk their lives on flaming, torpedo-struck tankers just to give eastern motorists enough gasoline to attend a bridge party—and that's final.

Thus five leading figures in the government told motorists in 17 eastern states and the District of Columbia on April 23 that "motoring-as-usual is out".

The joint statement warned motorists they had better plan right now to save gasoline, even before rationing starts May 15, by forming car-sharing pools with their neighbors and by eliminating unnecessary driving. When this much is done, the gasoline that is used can be further conserved by following simple rules of car care.

Loss of Life Cited

Statement was signed by Petroleum Co-ordinator Ickes; Chairman Nelson of War Production Board; Price Administrator Henderson; Defense Transportation Director Eastman; and Admiral Land, War Shipping Administrator.

"Already," they said, "hundreds of men have lost their lives at sea trying to bring in the oil needed for war. No patriotic American can or will ask men to risk their lives to preserve motoring as usual."

"Since sailors' lives are at stake every time a tanker plies between the Gulf Coast and the East, it is unthinkable that they be asked to take the risk of going down on a burning ship in order that someone may have gasoline to go to a bridge party or the ball game. In fact, it is unthinkable that they be asked to take this risk for any purpose except to fill those requirements which are absolutely essential."

Rubber Shortage Threatens Rails

NPN News Bureau

WASHINGTON — Rubber shortage is most serious threat now to railroad transportation, both passenger and freight traffic, according to Defense Transportation Co-ordinator Eastman, testifying April 24 before the Truman committee.

He pointed out that trucks accounted for 18% of what the rail freight movement was last year, that passenger-miles for buses totaled 15 billion as compared with 25 billion for the rails. In addition, private automobiles in inter-city movement, alone, ran up a passenger-mile total five times as great as rails and buses combined.

No Need for U. S. Control

The ODT director sees nothing in sight now that would make it necessary for the government to take over and operate the transportation system as was done in the last war.

ODT is endeavoring to help the railroads by obtaining more equipment for them, improving use of facilities and reducing work they have to do. Speedier loading and unloading is principal objective, with the average freight car now in terminal 80% of the time and on the road only 20%.

Intrastate Truck Rates Hiked

NPN News Bureau

CLEVELAND—Virginia, Mississippi, Arkansas and Kansas have authorized increases in freight rates by motor truck corresponding generally to those authorized by rail carriers in these states, National Highway Users Conference reports. Rates expire six months after end of war.

Could Replace Tankers in 6 Months With Other Facilities, Davies Says

NPN News Bureau

WASHINGTON — "Given another 6 months, we could develop a substitute overland transportation to meet the East Coast's normal demand," Deputy Petroleum Co-ordinator Davies told a special Senate Agricultural Subcommittee April 24. He also said:

"Today we are without tankers, having either lost them through enemy action or having diverted them to military uses in other areas. So, we are relying upon moving products overland by tank cars principally, by barges, pipelines and so forth."

Mr. Davies said it would take some months to provide adequate oil transportation facilities for the East Coast, as it would take more steel to build at least some new pipelines.

Shortage Brings Restrictions

"Meanwhile, it is just physically not possible to move into this area the amount that is required. Hence the need for these various restrictive orders that have been put into effect on gasoline, heating oil and asphalt. But it is basically a transportation problem."

Senator Gillette, Iowa, subcommittee chairman, intimated that he knew more coastwise tankers would be ready "within a comparatively short time", to which Mr. Davies replied, "It would be a god-send." However, tankers need protection, he added, presumably meaning convoy escort.

U. S. To Purchase 'Frozen' Trailers

NPN News Bureau

WASHINGTON—Truck-trailers, frozen by War Production Board, will be bought by the Defense Supplies Corp. and resold to the manufacturer when the trailers can again be sold to a retail purchaser through the truck rationing program administered by WPB and Office of Defense Transportation.

DSC, a Reconstruction Finance Corp. subsidiary, has drawn up a standard agreement, it was disclosed, whereby the government will buy a manufacturers' stock of truck trailers at the manufacturers' actual cost.

The manufacturer will store the trailers for DSC, buying them back when they can be sold to a purchaser. DSC has

(*Continued on page* 26)

KEY TO SITUATION"

For prompt handling address all inquiries to:

1241 Eastern Ave., Kansas City, Mo.

941 Sixth Ave. S. E., Minneapolis, Minn.

☐ Send Butler Twin-Tank Safety Transport Book
☐ Send information on securing Certificate to buy Transport
☐ Send Truck Tank Book

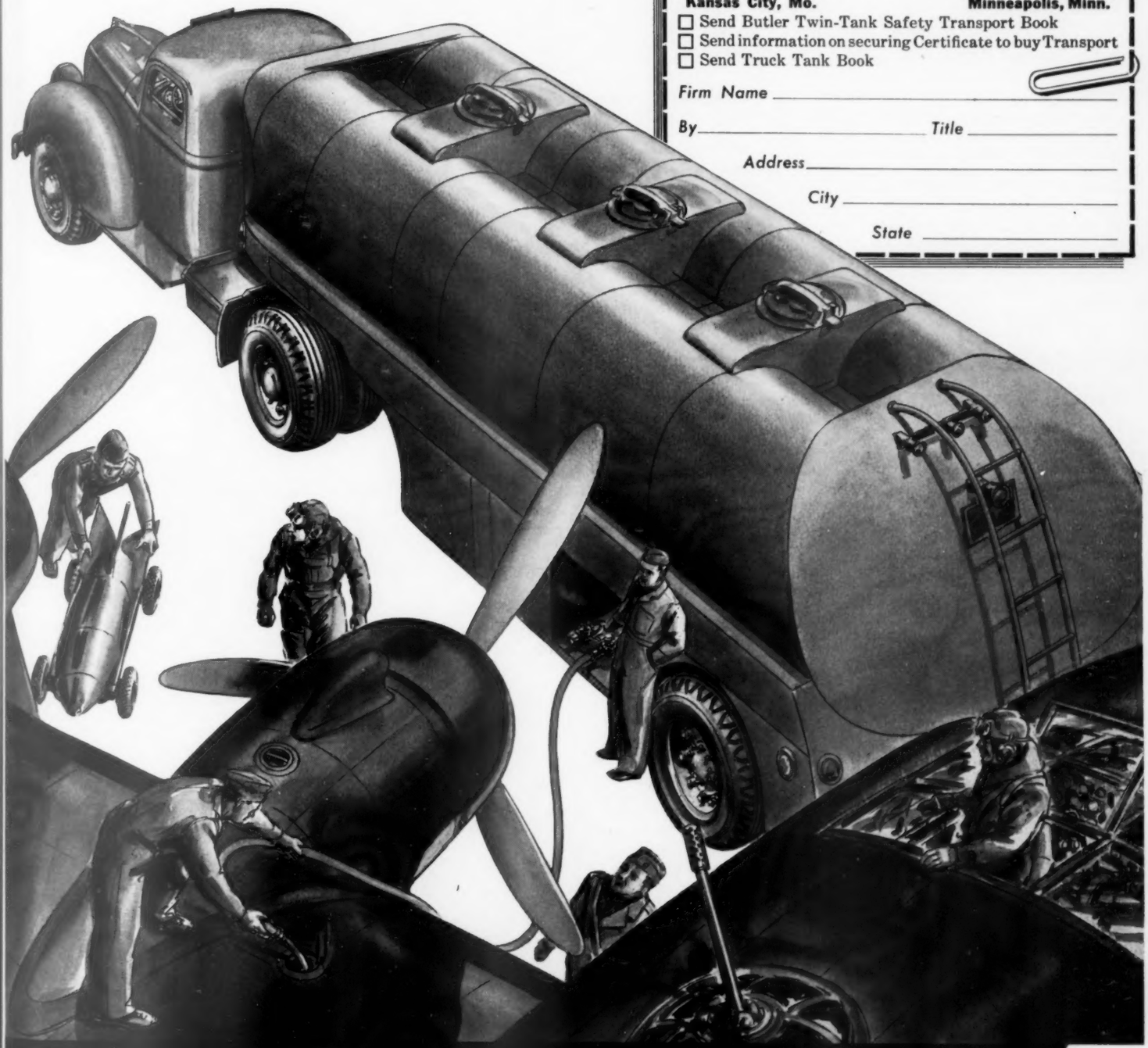
Firm Name _____

By _____ *Title* _____

Address _____

City _____

State _____



TANK *Safety* TRANSPORT

MINNEAPOLIS, MINN. . . . GALESBURG, ILL.

Other Sales Offices: WASHINGTON, NEW YORK, CHICAGO, ATLANTA, SHREVEPORT, HOUSTON. Also Representatives in other principal cities.

(*Continued from page* 22)

no plans to market the trailers itself.

Where to Apply

Oil companies desiring to purchase a truck trailer should apply on Form PD-310 to the nearest allocation office of ODT.

According to a DSC official, the theory is that the government will take the trailers off of the manufacturer's hands and he will make his profit on the resale.

DSC will resell the trailers to the manufacturer at a total of the manufacturers' cost and original purchase price, any amount the manufacturer spends on behalf of DSC for storage, cost of insurance, general expenses, and an amount equal to 4% per annum on basis of actual number of days computed on the other expenses.

ICC CALENDAR On Oil Trucking

Lang Transportation Corp. Common Carrier Application—No. MC-75812, including No. MC-75813 and No. MC-75812 (Sub-No. 1)—1. Applicant found entitled to continue operation as a common carrier by motor vehicle, in interstate or foreign commerce, over irregular routes, (1) of petroleum and petroleum products in bulk, in tank vehicles, from certain points in California to certain points in Arizona and Nevada, and rejected cargo or return shipments of contaminated products of the same kind, on return trips; and (2) of machinery, equipment, and supplies, used, or to be used, in the discovery, development, production or refinement of natural gas or petroleum and petroleum products, or in the construction and maintenance of electric power plants, electric transmission lines, and pipelines, between certain points in California, by reason of having been so engaged on June 1, 1935, and continuously since. 2. Public convenience and necessity found to require operation by applicant as a common carrier by motor vehicle, of petroleum and petroleum products in bulk, in tank vehicles, from certain points in California to certain points in Arizona and Nevada, and rejected cargo or returned shipments of contaminated products of the same kind, on return trips, over irregular routes. 3. Issuance of a certificate approved upon compliance by applicant with certain conditions, and applications in all other respects denied.

Contract Trucking Co. Inc., Extension — Petroleum Products — No. MC-41309 (Sub-No. 3)—Public convenience and necessity found to require operation by applicant as a common carrier by motor vehicle, of petroleum and petroleum products in tank trucks and in containers, from points in a designated area of Texas to points in New Mexico, and from Albuquerque, N. Mex., to Flagstaff and Holbrook, Ariz., over irregular routes. Issuance of a certificate approved upon compliance by applicant with certain conditions, and the application in all other respects denied.

Tank Cars Pulled Away from Wisconsin, So Trucks Take Over Intrastate Hauls

Special to NPN

MADISON, WIS. — Wisconsin's dependency upon trucks for most of its intrastate gasoline haulage now that tank car facilities have been withdrawn as a government war emergency measure has brought applications from 12 to 15 motor carriers for authority to institute service. D. O. Eldredge, district supervisor of the Interstate Commerce Commission, Bureau of Motor Carriers reported here today.

His recommendations for authorization will be forwarded to Washington this week, Mr. Eldredge said.

ODT Requests Data

Wisconsin has no pipelines and no oil wells, and an orderly system of haulage will be necessary from points of origin at pipelines near Minneapolis and Chicago and from storage facilities in Milwaukee, Green Bay, Superior and LaCrosse. Mississippi River bargeline service is available along the western border of the state and barge facilities for haulage along the Lake Michigan shore are under consideration, but service otherwise in the state must be by motor carriers, Mr. Eldredge explained.

Hugh Jones, director of the Wisconsin State Motor Vehicle Department, was in Chicago today, conferring with oil company representatives and federal authorities following receipt of a telegram from Joseph Eastman, federal director of transportation, asking specific information as to Wisconsin plans for obtaining its gasoline supply.

Load Limit Hike Urged

A Wisconsin statute limits gasoline truck loads to 2000 gal. and while Jones, on authority of Gov. Julius P. Heil, has announced that restrictions would not be enforced except on a limitation to 4000 gal. Federal authorities have asked that even this limitation be raised.

The question was to be taken up with the governor by Mr. Jones early this week and an announcement was anticipated that the statutory limit would be disregarded entirely.

In most states, Mr. Eldredge pointed out today, tractor trains commonly haul loads of 6500 gal. and more.

OPC Reorganizes Transportation Division

NPN News Bureau

WASHINGTON — Reorganization of Office of Petroleum Co-ordinator's transportation division provides for six sections, Director Major J. R. Parten announced.

Major Parten's 2 aides are: R. B. McLaughlin, associate director, who will handle pipeline and material and equipment problems; and Lee R. Cowles, assistant director, who will handle railway, water and motor transportation problems.

Sections and section chiefs follow:

Pipeline—Donald A. Sears, chief, and H. S. Austin, consultant. Mr. Sears was general superintendent of Shell Pipe Line Corp. and Mr. Austin was with New Jersey Standard for 30 years. He had retired from Jersey.

Tank Car — Boyd Wilson, chief, and Paul Bond, assistant. Mr. Wilson was assistant train master and division operator for Pennsylvania Railroad. (*See NPN Feb.* 18, *p.* 24); and Mr. Bond was cost accountant and cost distributor for Pure.

Inland Waterways — S. D. Archibold, chief, and Allan Bramkampt. Mr. Archibold was manager of Pittsburgh branch, Marine Department of New Jersey Standard, and Mr. Bramkampt was executive secretary of Mississippi River System Carriers' Assn. at Cincinnati.

Motor Transportation—Arch Turner, chief, and H. L. Armstrong, assistant. Mr. Turner was secretary-manager of Michigan Trucking Assn., and Mr. Armstrong was assistant traffic manager of Skelly at Kansas City.

Marine Section—W. C. Eberle formerly was assistant to Atlantic Refining's transportation manager. (*See NPN Feb.* 18, *p.* 24).

Materials and Equipment—Charles L. Lockett, chief. Mr. Lockett headed OPC's pipeline section for a time and prior to that worked for New Jersey Standard on the proposed 1580-mile crude line from East Texas to New York-Philadelphia area. Mr. Lockett has had 21 years experience in pipeline work.

OPC Transport Head

Major J. R. Parten

Congress May Probe Elkins Settlements

NPN News Bureau

WASHINGTON — Rep. Coffee, Wash., wants to know why Assistant Attorney General Arnold did not consult with Congress, as "promised", before consent decree was entered in the Elkins Act cases against 51 pipelines and he has introduced a resolution (H. Res. 472) calling for a Congressional investigation of this matter.

Resolution was referred to rules committee. Mr. Coffee said he asked for a rule to bring it before the House but up to April 27 none had been granted.

In a statement to the House, when resolution was introduced April 23, Mr. Coffee pointed out that originally Elkins Act suits were filed only against three companies, that these test cases were never adjudicated and that a new complaint and consent judgement was entered on same day against 50 pipeline companies.

He wants to know why the test cases were not prosecuted to a conclusion, especially since, he said, several billion dollars might have accrued to the government from all such cases.

Canada has issued an order to armed forces restricting maximum speed of any load-carrying vehicle in the Army to 25 miles per hour and passenger vehicles to 40 miles an hour—under any condition.

Correction

In reporting new trustees of National Petroleum Assn. (*NPN April* 22, *p.* 15), NPN incorrectly listed C. L. Fleming of the Ohio Oil Co. as "W. W. Flemming".

CHAMPION SPARK PLUGS

Today, as never before, is a time for a minimum of words and a maximum of productive action.

But we do wish, in these few words, to let all our loyal dealers know that Champion Spark Plugs are being produced in greater numbers than ever before. They are on duty in every phase of our wartime activity—

on land—

water—

and in the air!

They are piling up a record for dependability in every conceivable kind of extreme service. This record of dependability will inevitably add to their already world-wide reputation for better performance.

Producing more Champion Spark Plugs—better Champion Spark Plugs than ever before—is the one way in which we can best serve our country in the cause of Victory. We are doing that by meeting every possible need of our armed forces, *first!* After that we are taking care of the commercial needs of our customers to the limits of our material allotments.

We know you will understand that our first duty is to our armed forces. We feel sure you would not have it otherwise.

IT PAYS YOU WELL TO STOCK AND SELL—CHAMPIONS!

Urgent Need for More Wartime Wildcatting Emphasized at Oil Geologists' Convention

By Special Correspondent

DENVER — A vigorous wildcatting campaign is necessary "if we are to maintain a satisfactory discovery rate, as applied to new reserves," Frederic H. Lahee, Dallas, of Sun Oil Co., emphasized at the convention here April 22-24 of the American Assn. of Petroleum Geologists.

Mr. Lahee, following a custom started in 1936, reported on wildcat operations in his paper "Discovery Rate and Relation of Wildcatting to the Discovery of New Reserves."

Registered attendance was 900 for the 27th annual meeting of the A.A.P.G., which now has a roster of 3750 leading petroleum development specialists.

Meeting in conjunction with A.A.P.G. were the Society of Economic Paleontologists and Mineralogists and the Society of Exploration Geophysicists. Rocky Mountain Assn. of Petroleum Geologists, headed by H. E. Christensen, Denver, acted as host.

Wildcatting Up in '41

Total wildcats drilled in 1941 in the 24 states covered in Mr. Lahee's report was 3264 with a footage of 11,615,085. In 1940, 3038 wildcats were drilled with a footage of 10,144,870. Average depth of hole increased from 3339 ft. to 3559 ft. for all states covered.

Mr. Lahee's resume showed that discovery rate as measured between wildcatting and new reserves has declined since 1937—except for a slight rise in 1941. He said wildcatting must become "more vigorous" than heretofore.

"We must show a strongly rising curve in the annual number, and in the average depth of wildcat operations," Mr. Lahee stated. "The picture as we see it is a grave challenge to the industry as a whole to expand its program of exploration, and to encourage any branch of research that may give us new and better methods of looking for oil."

Aurin Named President

F. L. Aurin, Fort Worth, was elected president, succeeding E. W. Owen, San Antonio.

Mr. Aurin pledged full cooperation of A.A.P.G. with the war effort, especially in maintaining reserves and providing trained personnel in the armed forces.

Opening the convention, Mr. Owen predicted that as a result of the war effort, "petroleum will practically lose its identity as a fuel to become the raw material for manufacturing not only crude rubber but thousands of by-products."

Colorado's Gov. Ralph L. Carr extended welcome at the opening session.

DeGolyer Gives Report

Convention was given latest data by Director E. L. DeGolyer of Office of Petroleum Coordinator's conservation division, who discussed the general situation in his paper titled: "Notes on Present Status of the Problem of Exploration."

Wallace E. Pratt, New York, a director of New Jersey Standard, predicted that the American oil industry will ultimately be called upon to find and develop new oil fields in tropical America upon which, he said, the Western Hemisphere must come to rely for its supply of liquid fuels and lubricants. "Good geologists make good neighbors," he added.

Altogether, more than 100 papers and addresses were presented during the 3-day meeting.

New A.A.P.G. Prexy

F. L. Aurin, Fort Worth

Bureau Issues Study On Heaving Shale

NPN News Bureau

WASHINGTON — Known methods of conquering "heaving shale", geological formations which for more than 25 years have retarded deep petroleum drilling in some Gulf Coast regions are reviewed by Gustav Wade, Bureau of Mines, in Report of Investigations 3618, "Review of the Heaving Shale Problem in the Gulf Coast Region", Bureau announced April 22.

Discussed in the report are "mechanical" and "chemical" methods, found to have been effective in many, if not all, of the fields where "heaving shale" has retarded drilling and presented the "difficulty of establishing and maintaining thin, tenacious, and relatively impervious mud sheath on the surface of the shale exposed in the borehole".

A copy of this report may be obtained by writing to Bureau of Mines, Department of the Interior, Washington, D. C.

A.A.P.G. Speakers Discuss Geologist's Place in Oil Industry's War Efforts

Shown on the speaker's platform at opening of the A.A.P.G. convention are (left to right): H. E. Christensen, president, Rocky Mountain Assn. of Petroleum Geologists; C. E. Dobbin of Denver; Edgar W. Owen, San Antonio, retiring president; Gov. Ralph L. Carr of Colorado; President M. F. Coolbaugh of Colorado School of Mines; H. A. Stewart, Denver division manager of Texaco

The Best Defense Against *Submarines*

Depth bombs play havoc with America's undersea enemies. After listening devices locate the submarine, the charge is set to explode at that depth—causing water pressure to cave-in the submarine's sides.

The Best Defense Against *Waste*

There are unseen enemies for you to fight, too. One of them is *waste*. And every time you combat it—every time you give your product the protection it deserves—you help protect America.

Give your product the safe, sure convoy of Tri-Sure Closures. Safeguard every drum with a seal which cannot be removed unless it is deliberately destroyed; a plug which is always held tightly in place; a flange which assures complete drainage. Then you will know that every drop in every drum is safe from tampering, pilferage, leakage and waste.

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Reg. U. S. Pat. Off.
CLOSURES

AMERICAN FLANGE & MANUFACTURING CO. INC., 30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

SAFETY in Oil Trucking

This is the second installment in NPN's series on safe operation of tank trucks, covering safeguards to be observed when parking, crossing railroad tracks and handling leaks which might develop on the road. Safety measures for loading at bulk plants and terminals are also included.

Material in this story—including photographs—is reprinted from American Petroleum Institute's new manual: "Safe Transportation of Petroleum Products by Tank Truck". Copies of the manual are available at 25c each from American Petroleum Institute, 50 West 50th St., New York, N. Y.

First installment appeared in NPN April 15, p. 29.

Many accidents occur while a truck is being parked or when it is pulled away from the curb. Pulling up to and away from the curb presents one of the greatest problems for truck drivers. The driver should pay close attention when he moves away from the curb into the traffic flow, and he should wait to enter the traffic at a moment when he will not inconvenience approaching traffic unnecessarily.

• In order to avoid a rear-end collision, the driver should be constantly on the lookout while he is backing into the curb to see that some other driver does not stop in the space which he has chosen to park in.

• To park on a steep grade, the brakes should be set. A chock should be placed under the rear wheel, and the front wheel should be cut to the curb.

• If it should be necessary to park on a heavily traveled highway, every effort should be made to move the truck completely off the traffic lanes or to park in such a manner as to inconvenience traffic as little as possible. Warnings as required by law should be posted to protect both the parked truck and moving vehicles.

Stop! Look! Listen!

• The driver should plan his route so as to avoid as much as possible unprotected or blind railroad crossings. He should stop, look, and listen for approaching trains. The modern high-speed passenger train approaches a crossing quickly and quietly. The driver should proceed only if he is sure that a safe crossing can be made before the arrival of a train. In some states the laws require that trucks carrying flammable liquids should stop at all railroad crossings. The gear shift should be in neutral while the train is passing, and the brakes should be applied. It is best to cross tracks in low gear, shifting to other speeds only after the truck has cleared the tracks.

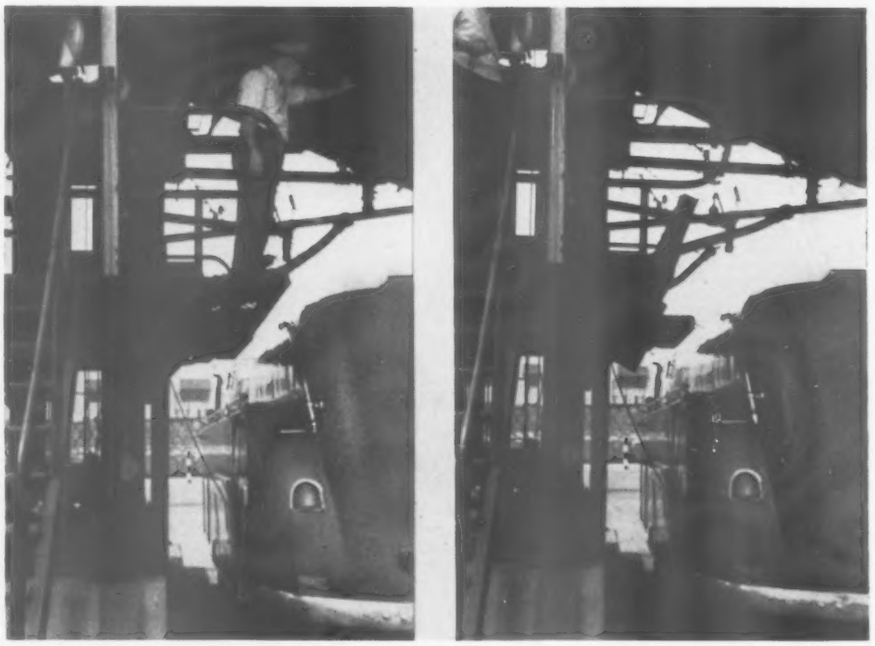
• Particular attention should be given to double or multiple tracks. Trucks have been struck by a train on another track when they proceeded after having waited for a train on the first track to pass.

Watch for Leaking Tanks

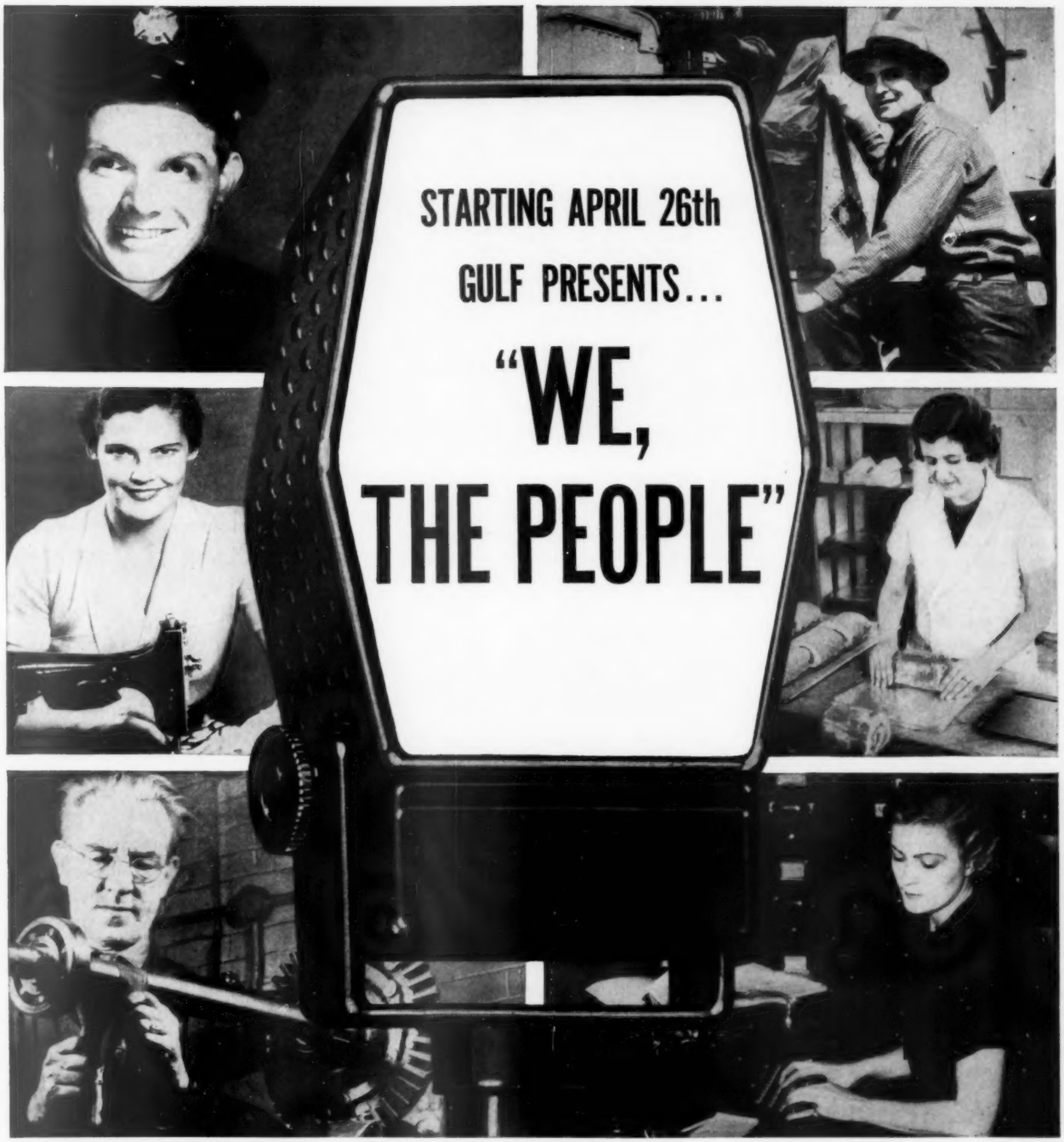
• Strict inspection and maintenance of tank trucks will make a leak on a gasoline tank an unusual occurrence. If at a delivery point a truck should be found to be leaking, arrangements should be made, if possible, to dump the contents of the leaking compartment into one of the tanks at the delivery point. If this is not possible, sources of ignition should be kept away from the leaking gasoline. The driver should notify his supervisor immediately. If the leaking gasoline is a hazard to life or property, as an additional safeguard the local fire depart-

Stop, look, listen at all railroad crossings

To eliminate static electricity, bonding cable which is connected to filling line should be clipped to an unpainted part of the truck before removing dome



Counterbalanced walkway serves as a stop-guard for the man on the rack and is always out of the truck's way when not in use. The man's weight causes the platform to flatten out when he steps on it and the counterbalance automatically pushes it back



For five and a half years, "WE, THE PEOPLE" made radio history by bringing millions of listeners true, heart-warming pictures of America at work and at play. Now, this country is at war. And so starting Sunday, April 26th, Gulf—on behalf of the Good Gulf dealers in 30 states—will present a bigger, more important series of "WE, THE PEOPLE"—dramatizing the war effort of our great nation!

This network series is an outstanding example of what Gulf means by co-operation. First, co-operation with government agencies. For "WE, THE PEOPLE" will work with them to present information to the people of the United States. Secondly, cooperation with thousands of Gulf dealers. For the goodwill created by a program like "WE, THE PEOPLE" will continue to make Gulf products and Gulf services a "buy-word" with American motorists!

"WE, THE PEOPLE"!—SUNDAY NIGHT AT 7:30 EASTERN WAR TIME—COLUMBIA NETWORK

GULF OIL CORP.
GULF REFINING CO.

ment should be called. Usually, when the fire department is called, the police respond also, and the two departments assist in keeping persons and sources of ignition away from the gasoline vapor.

• If only a small leak occurs on a street or highway where traffic is heavy and property values are high, it is better to keep the truck moving than to stop it and allow a concentration of vapors and liquid to accumulate. Without delay, the truck should be driven to the nearest point where its contents may be unloaded.

• If, while en route, a tank compartment has become damaged considerably and the contents escape rapidly through a break in the compartment wall, the driver should make every effort to park the truck in such a way that it will not endanger traffic. The public should be warned to keep away from the area, and the assistance of the police and the fire department should be summoned. If at all possible, the truck should be parked off the highway in a vacant lot and away from buildings and areas in which there is a concentration of people. If conditions permit, a pit should be dug where the gasoline can collect and where rapid vaporization will be prevented. The gasoline should not be allowed to flow into sewers or streams, but should be trapped in containers or in a depression or pit. As quickly as possible the gasoline should be transferred to closed containers, and the area should be policed until the vapors have been dissipated entirely.

Rules for Safe Loading

• Static electricity and stray currents are possible causes of oil fires and explosions. The flow of oil through pipe lines may generate static electricity on any electrically insulated object with which the oil comes into contact; stray currents also may be picked up from nearby electrical apparatus.

• Once the tank truck has been spotted at the loading rack, the truck motor stopped, the brakes set—but before the removal of the dome cover—the bonding cable which is connected to the filling line should be clipped or connected to an unpainted lug or metal part on the truck tank. It is important that the bonding connection be made before the removal of the cover because, if the cover is removed first, vapors will issue from the tank, possibly resulting in an explosive mixture in the surrounding atmosphere. If the connection between the bonding cable and the tank is made in the presence of a flammable mixture and the tank or filling line is charged from any source, the charge may dissipate by jumping to the bonding-cable clip at the moment the connection is made, and fire may result. Upon completion of the filling operation, the bonding line should not be disconnected until after the dome cover has been replaced.

• Open lights and other sources of ignition should be kept away from truck loading racks.

No maintenance or repair work constituting or producing sources of ignition should be carried on at loading racks.

• The loading compartments should be watched to see that there is no overflow of the liquid. The driver should stand by ready to close the quick-acting valve when the desired amount of liquid has entered the compartment.

Don't Mix Products

• The driver should be certain that he is not mixing products when he fills a compartment. Gasoline mixed with kerosine or fuel oil or gasoline vapors absorbed by kerosine or fuel oil, may change the flash point of the kerosine or fuel oil sufficiently to make it hazardous in ordinary use. Product tags attached to the valves of the pipe line which is being loaded and to the compartment outlet or faucet, together with a check of these tags by the driver and the plant man, prevent mistakes in the filling of compartments and in the delivery of products.

• Before the driver begins filling a compartment which still contains some liquid, he should be certain that the same kind of product is contained therein as the one with which he expects to fill up.

• If the compartments are interconnected, or do not have an air space provided with drainage between bulk heads, split loads should not be carried —*i.e.*, one compartment should not be loaded with gasoline and another with kerosine or fuel oil. Split loads are carried only when separate outlets from the compartments have been provided for the purpose of preventing a mixture of products in tank-truck discharge lines.

• If the compartment previously contained gasoline, or if there is any doubt as to what it did contain, and it is now to be used for kerosine, fuel oil, or other high-flash product, the compartment and the drain pipe and faucet should be emptied and flushed out with a small quantity of the product to be loaded before the compartment is filled with kerosine or fuel oil. The emergency valve should be raised to drain the pipe completely. Some trucks must be inclined to the front to drain the compartments, and inclined to the rear to drain the pipes. Kerosine or fuel oil now may be loaded up to the outage mark of the compartment. When the compartment is half full of kerosine or other high-flash product, two or three gallons or more of the product should be drawn off through the faucet and then returned to the same compartment. This will fill the air space below the emergency valve, and also will clear the drain pipe and faucet of any gasoline vapors which may have remained.

• If a compartment that previously contained gasoline has an accumulation of rusty scale, or if it is in a rusty condition, the compartment should be cleaned thoroughly before it is loaded again—especially if it is to be filled with fuel oil or kerosine.

• Many companies have a standard system of colors for painting buckets so as to identify the products. Strict attention should be given to see that each product goes into its correct container.

• Cans used for transporting kerosine should not be painted red, because red is almost universally used to identify a gasoline container. Containers should be closed tightly while they are transported on trucks.

TRADEMARKS

The following are trademark applications pertinent to our field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Munsey Building, Washington, D. C., trademark specialists.

A square with horizontal and vertical lines for shading. Ser. No. 446,646, The Atlantic Refining Co., Philadelphia, Pa. Filed: Aug. 29, 1941. For gasoline, furnace oils and fuel oils. Published: March 31, 1942.

A circle lined for blue and red, Ser. No. 448,886, The Atlantic Refining Co., Philadelphia, Pa. For gasoline. Filed: Nov. 24, 1941. Published: March 31, 1942.

EZ-UP and representation of a window and arrow, with words EZ-UP also on arrow, Ser. No. 449,215, Adell Santrey, doing business as Noiseless Window Co., New York, N. Y. Filed: Dec. 5, 1941. For lubricating oil for doors and window frames. Published: March 31, 1942.

AMOCO on black strip within a lined oval, Ser. No. 450,986, American Oil Co., Baltimore, Md. Filed: Feb. 16, 1942. For antifreeze. Published: April 14, 1942.

AMOCO on black strip within a plain oval, Ser. No. 450,988, American Oil Co., Baltimore, Md. Filed: Feb. 16, 1942. For antifreeze. Published: April 14, 1942.

RINGFLEX, Ser. No. 434,718, Gulf Oil Corp., Pittsburgh, Pa. Filed Aug. 6, 1940. For lubricating oils. Published: April 21, 1942.

GULFLEX, Ser. No. 435,499, Gulf Oil Corp., Pittsburgh, Pa. Filed Aug. 29, 1940. For lubricants — namely, lubricating oils and greases. Published: April 21, 1942.

EXCELUBE, Ser. No. 448,513, Lubrication Engineering Corp., Newark, N. J. Filed: Nov. 10, 1941. For lubricating oils and lubricating greases. Published: April 21, 1942.

BULL DOG, Ser. No. 449,045, Freedom Oil Co., Freedom, Pa. Filed: Nov. 29, 1941. For lubricating oils and greases. Published: April 21, 1942.

AIRCO within oval, Ser. No. 450,528, Air Reduction Sales Co., New York, N. Y. Filed Jan. 28, 1942. For stopcock lubricant. Published: April 21, 1942.

WARTIME NECESSITY

Patented McDonald Expansion Relief Gate Valve Prevents Loss of Vitally Needed Petroleum Products

The needless waste of gasoline and oil is uneconomic at any time. In wartime it is *inexcusable*. Every gallon lost reduces the country's supply of a vital military commodity—at a time when resources must be rigidly conserved.

And yet this year, as in previous years, thousands of barrels of gasoline and oil will be sacrificed to the summer sun. Heat causes expansion, expansion creates pressure and excessive pressure leads to leaks at gaskets and joints—a needless waste not only of an essential product but of the labor and transportation that it represents.

The condition is all the more deplorable because it is so easily corrected. Installed at the tank, the McDonald Expansion Relief Gate Valve provides positive, instant and automatic protection. As pressure builds up in the line, the disc in the by-pass of the gate valve opens, permitting the pressure in the line to equalize itself with that in the tank. Because pressure is relieved, leaks are forestalled and the resultant waste eliminated. A single, compact valve takes the place of unsightly overhead expansion lines, with their excessive use of critical materials, and does a better job besides!

Plate 860-N
Patented

McDONALD EXPANSION RELIEF GATE VALVE

4-inch Flanged Type Rising Stem O. S. & Y., or Non-Rising Stem.
Furnished flanged only.
For Rising Stem Type. O. S. & Y., specify Plate 860-R.
For Non-Rising Stem (illustrated) specify Plate 860-N.

Plate 858
Patented

McDONALD EXPANSION RELIEF GATE VALVE

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Mr. Oil Jobber:

Here's How Your Employes Stand In New Selective Service Rules

Much of the uncertainty about induction into the Army of draftees and deferments for those with dependents is dispelled by a statement issued April 25 from national headquarters of selective service system in Washington. Because of the many rumors circulating, which are worrying employes and employers alike, NPN prints herewith the full text of the official statement.—Ed.

Indicating that war requirements may compel induction of registrants with dependents into the armed forces, National Headquarters, Selective Service System, has directed the separation of such now deferred registrants into two groups (Class III-A and Class III-B) according to whether or not the individual registrants are engaged in activities essential to the Nation's war effort. Those who are not engaged in essential activities (Class III-A) will be the first selected for military service when it becomes necessary to induct men with dependents, it was announced.

Correlated with this basic division, two other major factors affecting the liability for military service of a registrant with dependents are emphasized in the National Headquarters memorandum to State Directors and local boards. They are the degree of dependency and whether or not it was acquired when the registrant had reason to anticipate selection for military service.

Broadly, the degree of dependency is determined by the actual need of the dependent for the civilian earnings of the registrant, the memorandum declares, regardless of whether or not the dependent is working or is capable of working. In this connection it is pointed out that the passage of allotment and allowance laws may hereafter require a change in classification of many registrants now deferred for dependency, but that at present there is no justification for putting a man in Class I-A, or available for general military service, where there is a financially dependent wife, child or children.

Concerning cases of comparatively recently acquired dependency, the memorandum is stern in the exclusion from deferment of registrants when there is indication that the dependency was acquired to avoid military service. It states:

"In cases where the dependency status (such as marriage) was acquired on or after December 8, 1941, or acquired when induction was imminent or for the primary purpose of providing a basis for dependency deferment, pregnancy, birth, or acquiring a child, shall not be cause for classification in Class III-A or Class III-B.

"Likewise in cases where no financial dependency existed by reason of the fact that the claimed dependent, such as a working wife, was providing adequately for his or her own support, and such dependent voluntarily ceased providing for his or her own support for the primary purpose of affording a basis for dependency deferment, there shall be no classification in Class III-A or Class III-B."

The two new classes for registrants deferred for dependency, created by division of the former Class III-A, are defined by the memorandum thus:

Class III-A. Any registrant upon whose earnings one or more persons depend for support in a reasonable manner and who *is not* engaged in an activity either essential to the war production program or essential to the support of the war effort.

Class III-B. Any registrant upon whose earnings one or more persons depend for support in a reasonable manner and who *is* engaged in an activity either essential to the war production program or essential to the support of the war effort.

In making this division for dependency classification, local boards are instructed that it is not necessary to determine whether the registrant is a "necessary man," but only to determine whether he is engaged in a nonessential activity, in which case he is placed in Class III-A, or whether he is engaged in an activity essential to war production or essential to the support of the war effort, in which case he is placed in Class III-B.

Outlining the procedure for classification in Class III-A and Class III-B, local boards are instructed that it should be made first with respect to those registrants of the third registration (February 16, 1942) to whom Selective Service Questionnaires are now being mailed and the classification of whom soon will be under consideration. At the same time, however, if the classification or reclassification of any registrant in the first and second registrations (October 16, 1940 and July 1, 1941) is considered by reason of a change of his status or for any other reason, consideration of his classification in Class III-A or Class III-B will be made.

After classification of registrants of the third registration, the memorandum states, local boards should then, "as rapidly as they are able to do so consistent with other duties," determine the division between Class III-A and Class III-B for registrants of the first and second registration who are properly subject to deferment for dependency under present policy.

No determination of the question of dependency will be required with respect to registrants of the fourth registration, being held Monday (April 27, 1942), the memorandum points out, since such registrants are not liable for military service.

Dependency Rules Tightened

Planning now in progress indicates the necessity for preparation for more drastic action concerning dependency deferments in the future, the memorandum declares, but says that: "For the time being, the gradual expansion of the armed forces requires no more than a general tightening of classification policies." It asserts:

"While the rule in peacetime was to favor the registrant's deferment in case of doubt, it is now the responsibility of the registrant to provide adequate proof as to his status. Future revision in policy will be determined by National Headquarters, and the agencies of the Selective Service System should not anticipate increased requirement by the selection and delivery for induction of men who are properly subject for deferment under current policies."

Pointing out that this current policy does not authorize the classification of a married man in Class I-A merely because his financially dependent wife is working, or is capable of working, and that, on the other hand, classification of a married man in Class III-A or Class III-B is not justified unless there is "actual financial dependency on the earnings of the registrant," the memorandum adds:

"The necessity of giving adequate consideration to the family unit where a child or children are involved cannot be overemphasized and in such instances, due consideration should be given to the family status, the maintenance of the home, and the desirability of continued paternal guidance and control. In the case of a registrant claiming dependents other than a wife, child or children, the test to be applied is whether the alleged dependent comes within the definition of a dependent person and is financially dependent upon the registrant for support. The local board shall not, in classifying a registrant, consider the question of whether some other person, not morally or legally obligated to do so, could or would support the dependents of the registrant in the event of his induction."

Support in a reasonable manner is defined as follows:

"In determining what constitutes support in a reasonable manner, the agencies of the Selective Service System shall consider as reasonable that measure of support which is considered adequate in accordance with the prevailing standards in the community at the time of classification or reclassification. In other words, the maintenance of

present standards for the dependent is not required but consideration shall be given by the local board to the providing of an adequate measure of support as set forth above. The prevailing standards in the community will be judged on current standards as they may, at the time, be lower by reason of the war."

Defining the determination of "imminence of selection" as a factor for deciding whether or not dependency was acquired to evade military service, the memorandum says:

"A registrant's selection is considered to be imminent at such time in the course of his consideration by the local board that a reasonable man in his circumstances would be put on notice that in the normal course of events he would, at an early date, be called upon to perform military service. The circumstances to be considered in the determination of imminence of selection are the state of the national emergency, the registrant's order number, the registrant's classification, if any, and other such considerations which would appeal *to the mind of the reasonable man to assist him in forming a judgment with respect to his future.*

"The fact that a registrant acquired a status, such as by marriage, since September 16, 1940, but before December 8, 1941, is not in itself controlling. On the other hand, the acquiring of such status when the registrant's selection for military service is not far off will be adequate reason for denying deferred classification."

Commenting on prospective manpower requirements, the memorandum says that the induction of men into the armed forces may soon use up the supply of physically-fit men available for military service under present Selective Service policies. Also, it points out that already there are shortages of trained, qualified, or skilled persons for essential activities, and it declares: "To fill the needs of the armed forces and essential activities, we must look in a large part to those who have been deferred for dependency."

However, the memorandum emphasizes that before men deferred for dependency are inducted, "there will first be selected all men who can be made available for military service under current policies and standards." Also it declares that when registrants in Class III-A and Class III-B are considered for military service, "regard will be had for both the degree of dependency and occupation," and that registrants who have the greatest degree of dependency, "such as a dependent wife and children," will be the last group sought for military service, "if in addition, they have become necessary men in war production or supporting activities."

Many May Enter War Work

Concerning voluntary employment in essential activities with regard to its effect on the possible number of men now deferred for dependency who might become liable for military service, the memorandum says:

"As the war effort progresses and nonessential activities are curtailed, many of those employed in nonessential activities will become available for more essential employment. Many registrants deferred by reason of dependency will leave nonessential employment and seek employment in or training for essential activities. This voluntary movement from nonessential to essential activities will in a large measure accomplish a direction of manpower into activities where needed. It should be a gradual, orderly, and economically sound transfer from employment in nonessential activities to employment in or training for essential activities. Persons engaged in nonessential activities should not cease their present employment until their services are needed in some essential activity.

"The Federal Government will make known the opportunities for training and employment of qualified and skilled persons in essential activities so that this shift of employment may be made with the minimum disruption to the welfare of the community, the family, and the individual, consistent with the prosecution of the war. Each individual registrant knows or should inquire into his own capabilities and the opportunities for employment in war industry, and should exert himself in the securing of such employment without awaiting specific instructions from the Government."

THEY COME TO CITIES SERVICE FOR THAT *extra year of youth*

. . . that means an extra year of *profits* for Cities Service stations!

Today wise motorists are heading for the nearest Cities Service station—and there's a reason.

They know Cities Service stations are geared to help make their cars perform better and *last longer.*

For example: Only Cities Service can give them Koolmotor Motor Oil — the perfect Pennsylvania Motor Oil. Every drop has been *heat-treated* . . . subjected to far higher temperatures at the refinery than it ever will experience in the engine of any car.

The result is better protection . . . *longer-lasting* protection . . . just what motorists today are looking for.

And there's plenty more they're looking for in every Cities Service station — Koolmotor Gasolene, Cisco Pep, the Power Prover, Sealed Lubrication—just to name a few.

These are Cities Service specials that help give cars an extra year of youth . . . and as long as they're rolling, motorists are spending.

Why not get on the bandwagon that's going to keep on going?

OIL IS AMMUNITION — USE IT WISELY!

CITIES SERVICE OILS
ONCE-ALWAYS

CITIES SERVICE OIL COMPANIES

NEW YORK • CHICAGO • SHREVEPORT

TERMINAL FACILITIES WITHOUT INVESTMENT

Users of General American Terminal Service enjoy "front-door service" from the GATX Fleet as available. In this fleet are tank cars of the exact type best suited to your requirements, no matter what they may be. And, of course, each strategically located storage terminal affords the utmost in safety, privacy, speed and economy. You get these benefits, moreover, without a penny's investment on your part.

ONLY GENERAL AMERICAN GIVES ALL THESE ADVANTAGES :

1. *RELIABLE CUSTODIANSHIP.* Our warehouse receipts are highest type of collateral everywhere.
2. *MODERN PROTECTION.* Latest safety appliances; lowest insurance rates; minimum evaporation losses.
3. *INDEPENDENT OWNERSHIP.* Strictest privacy. We do not buy, sell or refine any oils.
4. *NO WHARFAGE.* There is no wharfage charge at our own private docks.
5. *SPEED WITH SAFETY.* Day and night crews, complete facilities, eliminate all shipping delays.
6. *LARGE TANK CAR FLEET.* Now working night and day, delivering essentials of war.
7. *NO CONTAMINATION.* Separate pumps, lines, storage zones for dissimilar commodities.

KEEP 'EM ROLLING! Freight cars—particularly tank cars—are vital to Victory. They must be loaded, unloaded, kept moving with all possible speed. Delays may cost lives!

GATX GENERAL AMERICAN

GENERAL AMERICAN TANK STORAGE TERMINALS

GOODHOPE and WESTWEGO, LA. (Port of New Orleans)
CARTERET, NEW JERSEY (Port of New York)
CORPUS CHRISTI, TEXAS GALENA PARK, TEXAS (Port of Houston)

A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORP.

COMING MEETINGS

MAY

American Institute of Chemical Engineers, Semi-Annual Meeting, Boston, Mass., Mon.-Wed., May 11-13.

Natural Gasoline Assn. of America, 21st Annual Convention, Mayo Hotel, Tulsa, Okla., Wed.-Fri., May 13-15.

Virginia Oil Men's Assn., Spring Meeting, John Marshall Hotel, Richmond, Va., Thurs.-Fri., May 21-22.

Virginia Petroleum Jobbers Assn., Spring Meeting, John Marshall Hotel, Richmond, Va., Thurs., May 21.

National Defense Exposition, Houston, Tex., Mon.-Sun., May 18-24.

National Assn. of Purchasing Agents, (Oil Company Buyers' Group), Waldorf-Astoria Hotel, New York, N. Y., Mon.-Thurs., May 25-28.

Society of Automotive Engineers, Annual Summer Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va., Sun.-Fri., May 31-June 5.

JUNE

Illinois-Indiana Petroleum Assn. and American Petroleum Institute, Illinois Basin Chapter, annual meetings combined, Robinson, Ill., Sat., June 6.

National Assn. of Tax Administrators, 10th Annual Conference, Hotel Fort Des Moines, Des Moines, Ia., Sun.-Wed., June 7-10.

American Society of Mechanical Engineers, Semi-Annual Meeting, Cleveland, Ohio, Mon.-Thurs., June 8-11.

Oil Trades Assn. of New York, Sports Day, Pelham Country Club, Pelham Manor, N. Y., Tues., June 9.

North American Gasoline Tax Conference, Regional Conference, New York, N. Y., Fri., June 19.

American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N. J., Mon.-Fri., June 22-26.

New Jersey Oil Trade Assn., Summer Golf Outing, Newark, N. J., Thurs., June 25.

SEPTEMBER

Oil Trades Assn. of New York, Sports Day, Pelham Country Club, Pelham Manor, N. Y., Tues., Sept. 8.

National Assn. of Assessing Officers, 9th Annual Conference, Denver, Colo., Wed.-Sat., Sept. 9-12.

New England Tax Conference, Hotel Biltmore Providence, R. I., Wed.-Thurs., Sept. 30-Oct. 1.

OCTOBER

Texas Mid-Continent Oil & Gas Assn., 23rd Annual Meeting, Dallas, Tex., Thurs.-Sat., Oct. 8-10.

National Stripper Well Assn., Annual Meeting, Wichita, Kans., Mon., Oct. 12.

American Society of Mechanical Engineers, Fall Meeting, Rochester, N. Y., Mon.-Wed., Oct. 12-14.

Independent Petroleum Assn. of America, 13th Annual Meeting, Wichita, Kans., Tues.-Thurs., Oct. 20-22.

Indiana Independent Petroleum Assn., Hotel Severin, Indianapolis, Ind., Wed-Thurs., Oct. 14-15.

National Tax Conference, Netherlands Plaza Hotel, Cincinnati, Ohio, Mon.-Thurs., Oct. 19-22.

Ohio Petroleum Marketers Assn., Annual Convention and Marketing Exposition, Hotel Deshler-Wallick, Columbus, Ohio, Wed.-Thurs., Oct. 20-21.

National Lubricating Grease Institute, 10th Annual Meeting, New Orleans, La., Sun.-Thurs., Oct. 25-29.

1942 Illinois Mineral Industries Conference, Campus, University of Illinois, Urbana, Ill., Fri.-Sat., Oct. 30-31.

NOVEMBER

American Petroleum Institute, 23rd Annual Meeting, Stevens Hotel, Chicago, Ill., Mon.-Fri., Nov. 9-13.

American Institute of Chemical Engineers, 35th Annual Meeting, Netherland Plaza, Cincinnati, O., Mon.-Wed., Nov. 16-18.

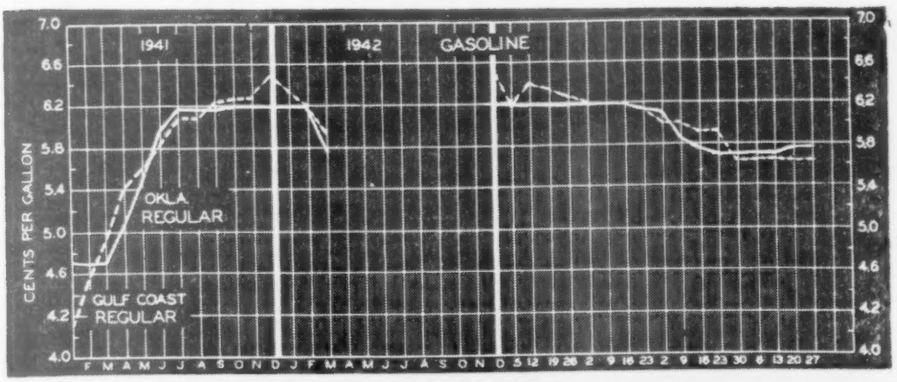
American Chemical Society, National Chemical Exposition and National Industrial Chemical Conference, Stevens Hotel, Chicago, Ill., Tues.-Sat., Nov. 17-21.

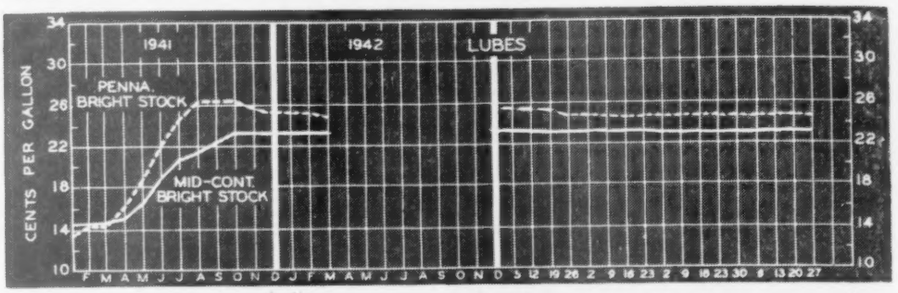
American Society of Mechanical Engineers, Annual Meeting, New Yorkk, N. Y., Mon.-Fri., Nov. 30-Dec. 4.

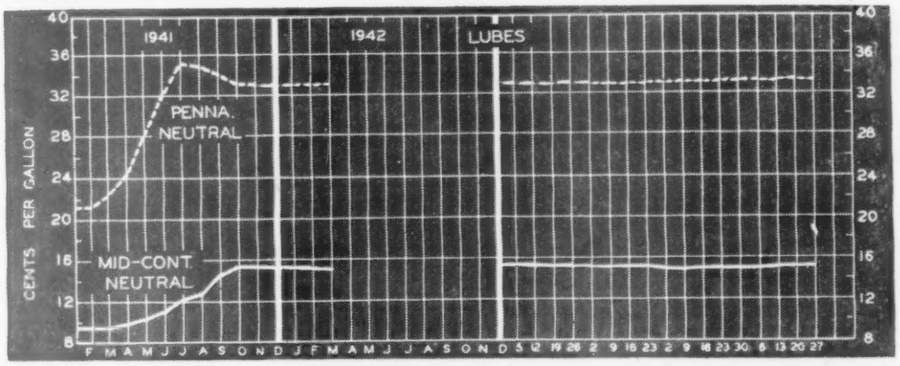
STATISTICS

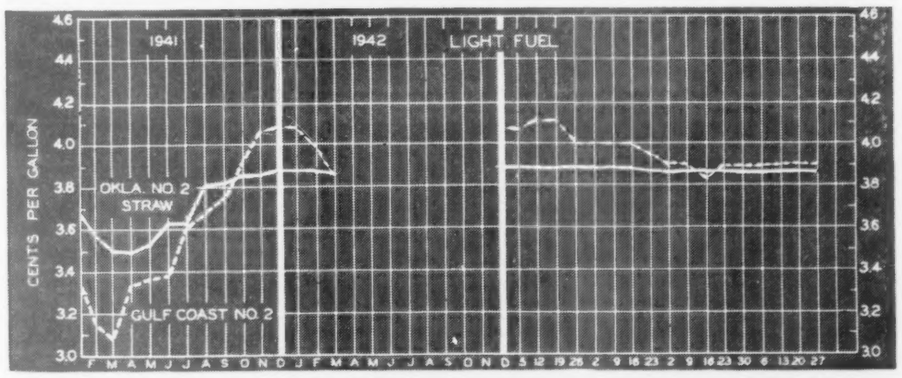
Refinery Prices

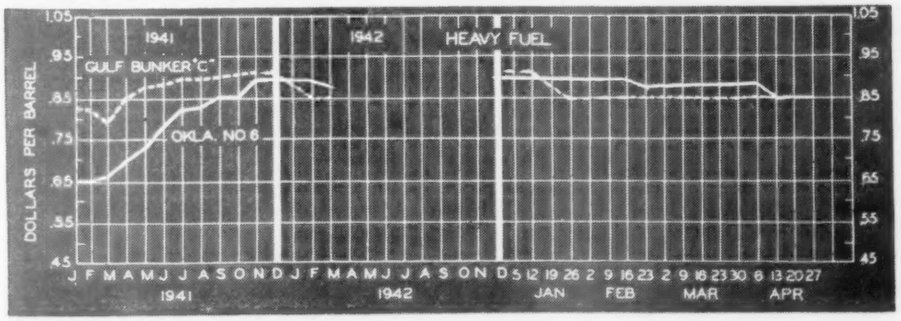
Monthly prices in graphs are averages of daily high and low prices shown in Platt's Oilgram
Weekly prices are averages of high and low prices shown in Monday Oilgram, and in NPN











Inventories, Mar. 31, 1942, of Pennsylvania Oils Other than Lubricating Oils

(Compiled by National Pet. Ass'n. from reports of oil region refiners. Figures in barrels).

1—Naphthas & Gasoline	
(1) Straight run unblended and/or unleaded, for sale as motor fuel	45,969
(2) Naphtha and gasoline, for sale for blending or further refining, or held at refinery for further distillation, reforming, blending or leading	238,848
(3) Below 65 octane, not included in (1) or (2) above	11,449
(4) 65 octane & above	482,680
2—Salable naphthas other than motor fuel material (does not include refinery process naphthas)	31,488
3—Kerosine	74,310
4—36-40 gas oil (includes furnace oil)	94,730
5—Fuel oil (not reported above)	32,281
6—Oils held as cracking plant charging stocks	283,808
7—Non-viscous neutral	42,479
8—Wax distillate	95,646
9—Crude petrolatum	23,333
10—Wax (lbs.)	4,614,006

G. C. R. A. Stocks Report

(Compiled by Gulf Coast Refiners Assn. from reports of member companies. Figures in barrels.)

	Apr. 15	Apr. 1
Gasoline Stocks, Total	2,761,575	2,786,203
Aviation Gasoline	273,120	398,289
Motor Fuel	2,131,866	2,101,628
Naphtha	356,589	286,286
Kerosine	127,015	151,947
Diesel Gas Oil	489,418	401,454
Diesel Fuel	42,606	36,587
Gas Oils, other types	1,203,401	1,188,039
No. 5 Fuel Oil	290,936	393,006
Bunker "C" Fuel Oil	421,143	476,232
Cutback Asphalt	55,699	26,583
Crude Runs (daily average)	104,947	106,627

Pennsylvania Lubricating Oils

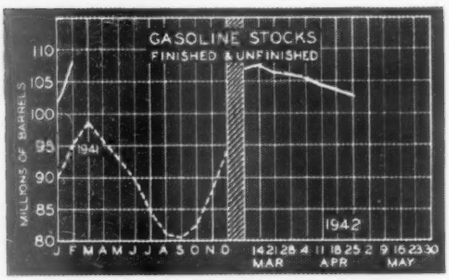
(Compiled by National Petroleum Assn. from reports of all companies which refine Pennsylvania grade crude oil. Figures in barrels)

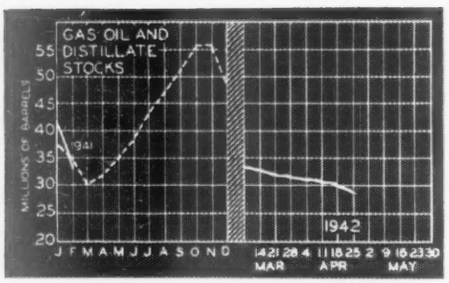
	Production Mar., 1942	Inventory Mar. 31, 1942	Inventory Feb. 28, 1942	Inventory Mar. 31, 1941
1. Raw Long Residuum	85,824	50,304	42,720	28,839
2. 600 Steam Refined Stock	310,168	268,321	268,161	262,538
3. Other Steam Refined Stock	55,727	79,881	71,902	102,976
4. Finished Dewaxed Long Residuum	47,985	55,164	56,495	66,344
5. Bright Stock	188,639	306,021	337,053	458,458
6. Viscous Neutral	85,407	98,430	95,524	66,485
7. Viscous Neutral	115,786	81,070	82,396	129,177

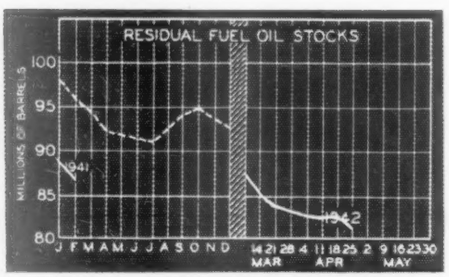
Item 1 includes all raw long residuum below, and not salable as, 600 fire.
Item 2 includes all steam refined stock commonly sold or used as 600 and as raw material for bright stock.
Item 3 includes all material not reported in items 1 & 2.
Item 5 does not include any material reported in item 4.
Item 6 includes viscous neutral below 180 vis. but not below 142 vis. at 100.
Item 7 includes viscous neutral 180 vis. at 100 and above.

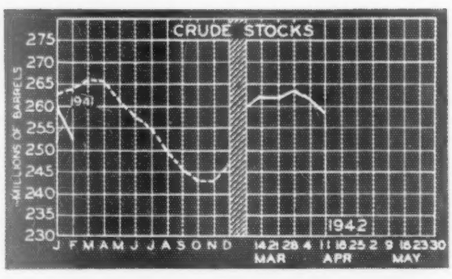
STATISTICS

Monthly figures are actual as reported by Bureau of Mines. Weekly figures are as estimated by American Petroleum Institute on Bureau of Mines basis, except crude stocks which are as reported by Bureau of Mines.









Refinery Operations

(American Petroleum Institute figures in thousands of barrels of 42 gallons each. Figures include reported totals plus an estimate of unreported amounts and are therefore on a Bureau of Mines basis.)

Districts	Daily Potential Refining Capacity Week Ended April 18	Per Cent of Refining Capacity Reporting Week Ended April 18	Daily Average Crude Runs to Stills Week Ended April 18	Per Cent of Reporting Capacity Operated Week Ended April 18
Combined†	2,383	89.7	1,697	71.2
Appalachian	174	84.5	158	90.8
Ind., Ill., Ky.	784	84.9	299	89.2
Okla., Kans., Mo.	418	81.1	365	87.3
Rocky Mt.	138	50.7	92	66.7
California	787	90.9	537	68.2
TOTAL U. S.—B. of M. Basis	4,684	86.9	3,548	75.7
U. S.—B. of M. Basis April 19, 1941			3,735	

†Includes East Coast, Texas Gulf, Louisiana Gulf, North Louisiana-Arkansas, and Inland Texas districts.

	Gasoline Production at Refineries inc. Natural Blended Week Ended April 18	Stocks of Finished and Unfinished Gasoline Week Ended April 18	Total Stocks Gas Oil & Distillates Week Ended April 18	Total Stocks Residual Fuel Oil Week Ended April 18
Combined†	5,106	46,741	14,245	17,007
Appalachian	479	3,981	359	676
Ind., Ill., Ky.	2,396	22,723	2,475	3,507
Okla., Kans., Mo.	1,311	10,245	797	1,712
Rocky Mt.	283	2,497	277	598
California	1,430	17,315	11,776	59,077
Total U. S.—B. of M. Basis	11,005	103,502*	29,929	82,577
U. S.—B. of M. Basis April 19, 1941	12,359		29,680	93,499

*Finished 95,439,000 bbls; Unfinished 8,063,000 bbls. †Includes East Coast, Texas Gulf, Louisiana Gulf, North Louisiana-Arkansas, and Inland Texas districts.

N.P.N. Gasoline Index

	Dealer T.W. Cents per Gallon	Tank Car Cents per Gallon
Apr. 27	10.33	6.50
Month ago	10.34	6.49
Year ago	9.37	5.68

Dealer index is an average of "undivided" dealer prices, ex-tax, in 50 cities.

Tank car index is a weighted average of following wholesale markets for regular-grade gasoline, FOB refineries or terminals: Okla., Mid-Western, W. Penna., Calif., N. Y. Harbor, Philadelphia, Jacksonville, Boston, Gulf Coast.

Pennsylvania Crude Runs

(Compiled by National Petroleum Assn. from reports of all companies which refined Pennsylvania crude. Figures in barrels.)

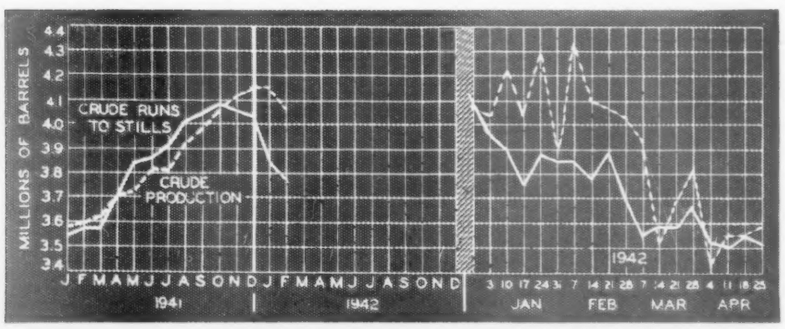
Week Ended	Daily Average	Week Ended	Daily Average
Jan. 3	72,172	Mar. 7	80,131
Jan. 10	77,676	Mar. 14	76,862
Jan. 17	81,658	Mar. 21	79,510
Jan. 24	84,089	Mar. 28	84,185
Jan. 31	82,603	Apr. 4	78,175
Feb. 7	74,927	Apr. 11	82,557
Feb. 14	77,436	Apr. 18	82,067
Feb. 21	82,682	1941 Low	61,384
Feb. 28	84,173	1941 High	84,326

Crude Oil Stocks

(Bureau of Mines figures; thousands of barrels)

Grade or Origin	Apr. 4	Apr. 11	Change
Pennsylvania Grade	3,476	3,490	+ 14
Other Appalachian	1,405	1,438	+ 33
Lima-Michigan	1,558	1,606	+ 48
Illinois-Indiana	18,918	18,356	— 562
Arkansas	2,974	3,082	+ 108
Kansas	7,407	7,894	+ 487
Louisiana:	13,537	13,279	— 258
Northern	4,227	4,096	— 131
Gulf Coast	9,310	9,183	— 129
Mississippi	2,290	2,152	— 138
New Mexico	7,317	7,224	— 93
Oklahoma	50,328	50,538	+ 210
Texas:	96,918	94,260	—2,658
East Texas	23,970	23,270	— 700
West Texas	24,083	23,094	— 989
Gulf Texas	25,580	25,324	— 256
Other Texas	23,285	22,572	— 713
Rocky Mountain	16,465	16,305	— 160
California	38,137	37,820	— 317
Foreign	1,038	998	— 40
Total U. S. refinable	261,768	258,442	—3,326
Heavy in California	11,754	11,685	— 69
East Coast refinery crude	7,266	7,033	— 233
East Coast pipe line crude	277	268	— 9
East Coast refined products	39,452	38,337	—1,115
Total all oils	46,995	45,538	—1,357
East Coast bonded stocks (estimated)*	850	850	

*Not included above—breakdown for April 11 is 150 for distillate and 700 for residual.

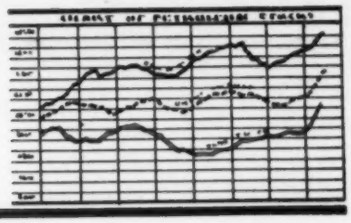

MILLIONS OF BARRELS
CRUDE RUNS TO STILLS
CRUDE PRODUCTION
1941
1942
J F M A M J J A S O N D J F M A M J J A S O N D
3 10 17 24 3 7 14 21 28 7 14 21 28 4 11 18 25
JAN FEB MAR APR

Crude Oil Production

(American Petroleum Institute figures)

	WEEK ENDED Apr. 25 Barrels (Daily Average)	WEEK ENDED Apr. 18 Barrels (Daily Average)
Oklahoma	400,750	396,650
Kansas	253,200	253,100
Nebraska	3,900	3,950
Texas	1,118,550	1,083,800
Louisiana	317,550	325,150
Arkansas	73,500	73,450
Mississippi	94,700	96,350
Illinois	298,800	294,850
Indiana	18,600	21,350
Eastern (Ill. & Ind. excluded)	98,700	98,250
Michigan	60,800	59,200
Wyoming	93,600	93,809
Montana	21,600	21,660
Colorado	5,300	4,900
New Mexico	79,400	79,200
California	642,400	639,400
Total U.S.	3,581,350	3,545,000

Oil MARKETS



Atlantic Coast

NEW YORK, April 25.—East Coast suppliers reported continued heavy demand for all products the past week, with supply scarcities unrelieved. Unusually cold April has sustained call for heating oils and kerosine, they said, with jobbers and distributors drawing to full extent allowed against their quotas for light products.

Trade opinion varied over the effect on supplies of consumer card rationing of gasoline announced by OPA April 22. Some felt supply situation on gasoline would be eased; others, that it would continue tight, with deliveries into the area curtailed in proportion to ration allowances to permit concentration of transportation facilities on fuel oils.

Quotations generally were unchanged at all points. Supplier at Philadelphia, Baltimore, and Norfolk said he had withdrawn his quotations and cancelled price provisions of his contracts because of scarcity of products.

Mid-Western

CHICAGO, April 25—Low octane gasolines were up 0.125c at Chicago the past week with refiners quotations ranging 5.125 to 5.625c for 63-66 oct., and 4.75 to 5.25c for 60 oct. & below, FOB Group 3. Marketers quotations ranged 4.625 to 4.875c, and 4.25 to 4.5c, for the 2 grades, respectively. Demand continued heavy, both from the east and middle west.

Open spot sales reported by 4 marketers during the week were: 9 cars 78 oct. Ethyl, 2 cars at 6c, and 7 cars at 6.125c; 12 cars 70-72 oct., 10 cars at 5.125c, and 2 cars at 5.25c; 7 cars 60 oct. & below at 4.5c; 2 cars range oil at 4c; and 6 cars No. 2 straw fuel at 3.5c, FOB Group 3.

Refiners Group 3 quotations ranged 6.5 to 6.75c for 78 oct., 5.5 to 6c for 72-74 oct., 4c for range oil, and 3.6 to 3.625c for No. 2 straw. Marketers Group 3 quotations ranged 5.875 to 6.125c, 5 to 5.375c, 3.875 to 4c, and 3.375 to 3.625c, for the 5 products, respectively.

California

LOS ANGELES, April 24.—Further improvement in gasoline was reported on the West Coast the past week, with refiners quotations up 0.25 to 0.5c and ranging upward from 5c for regular-grade. Pick-up was attributed to closing of one refinery and consolidation of several others.

Natural gasoline and fuel oil markets remained steady. No changes in quotations were reported.

Mid-Continent

TULSA, April 25.—Demand for refined products generally was steady at unchanged prices in the Mid-Continent the past week.

Oklahoma refiner said he was sold up on gasoline "to the limit of available transportation" for the next 35-40 days, but added he was still quoting for shipment in buyer's cars or by truck transport. Several others were not accepting orders "beyond our ability to ship", while some were up to 8 days behind on orders due to lack of cars. East Coast inquiries continued.

Stocks of light fuels were low and closely held. Lube stocks were still tight and demand heavy. Wax also was tight and demand heavy.

Pennsylvania

NEW YORK, April 25.—Demand for all products in Western Penna. continued steady and in "enormous" volume the past week, with refiners generally sold up on all products and turning down inquiries.

No let-up apparent in demand for burning oils or kerosine resulting from warmer weather. Uses of light fuel for diesel engines supporting demand, refiners said. Call expected to continue in good volume throughout the summer.

Refiners were baffled over the inclusion of Western Penna. under OPA proposed plans for consumer card rationing of gasoline. Gasoline is plentiful in both fields and there's no need for rationing, they said. Several plants were said to be on the verge of shutting down now because of limited storage resulting from present 33 1/3 curtailment of deliveries. One refiner said he had expanded his marketing territory already and rationing in Western Penna. would force shipments into Ohio where gasoline is plentiful also.

Gulf

NEW YORK, April 25.—Two inquiries for 72-74 oct. (ASTM) leaded gasoline were reported at the Gulf the week ended April 25, one for 250,000 gal. per month in seller's cars and the other for 30,000 bbls. for prompt lifting, destination undisclosed. Cargo quotations ranged from 5.25 to 6c.

Inquiry also was reported for 50,000 bbls. diesel oil bunkers for prompt lifting.

Cargo market was quiet otherwise, with no changes in quotations reported and transportation shortage hampering sales.

Index of Governmental Orders Concerning Petroleum Prices

Orders, "requests", "ceilings", and other statements issued by governmental agencies concerning prices of petroleum and products, prices for which are published in this market section of NATIONAL PETROLEUM NEWS, have been published as follows:

	NATIONAL PETROLEUM NEWS	PLATT'S OILGRAM	Platt's OIL-Law-GRAM
Nov. 7, '41—See Jan. 17, '42 below.			
Nov. 10, '41—See Jan. 17, '42 below.			
Nov. 21, '41—Maximum prices for paraffin wax	Nov. 26, pg. 5	Nov. 21, pg. 1	Pg. 66
Nov. 28, '41—See Jan. 17, '42 below.			
Jan. 17, '42—OPA letter restating contents of letters of Nov. 7, 10 and 28, '41;	Jan. 21, pg. 7	Jan. 19, pg. 1	Pg. 135
Jan. 28, '42—Amendment No. 1 to paraffin wax price schedule	Feb. 11, pg. 20	Jan. 29, pg. 1	Pg. 153
Feb. 2, '42—OPA Price Schedule No. 88	Feb. 11, pg. 17	Feb. 4, pg. 1	Pg. 159
Feb. 5, '42—Amendment No. 1 to OPA Price Schedule No. 88	Feb. 11, pg. 18	Feb. 9, pg. 1	Pg. 167
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REFINERY and SEABOARD PRICES

In bulk lots by Motor Transport, Tank Car, Barge or Tanker as shown

NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.

HOW PRICES ARE REPORTED—

Refinery and Seaboard prices in National Petroleum News are gathered by PLATT'S OILGRAM and are published in the Monday issue of the OILGRAM.

PLATT'S OILGRAM is a reporting service issued in three identical editions daily from News Bureaus at New York, Cleveland, and Tulsa, Okla. PLATT'S OILGRAM gathers and publishes what its publisher and representatives believe to be accurate news of sales, prices and current happenings affecting the oil industry and that will be of interest to its subscribers. As this information is usually private, OILGRAM reports it according to what it is able to obtain from sources deemed reliable.

All information is supplied without guarantee as to its completeness, accuracy, time of transmission or promptness of delivery.

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Prices shown in the tables are quotations (meaning sellers' general offers or posted prices), or actual sales prices, reported to OILGRAM by refiners for "open spot" transactions, except as otherwise specified.

Prices arrived at by discounts off a specified price or "market date of shipment," prices named in contracts or prices arrived at in accordance with any arrangement made prior to date of sale, are not for "open spot" transactions and therefore are not considered in making the price tables. Prices made to brokers and prices in "Inter-refinery" transactions are also not considered except as may be noted.

All prices are for "immediate" shipment except in Gulf Coast bulk transactions where shipment is generally to be made in ninety days. Prices are FOB refineries, pipelines, or tanker terminals in districts designated.

Prices shown are for quantities in bulk such as tank car lots, motor transport lots or barge lots; and in cents per gallon; heavy fuel oils are in dollars per barrel of 42 U.S. gallons; wax and petrolatums are in cents per pound. Prices applying to barges or cargoes only are so designated.

Prices do not include taxes or inspection fees. Prices are published at the close of the business day.

Mid-Western prices in the tables were gathered from refiners with offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Other refinery prices are given by and for the particular refining district where the material is made and from which it is shipped.

When prices obtained by OILGRAM do not conform to these conditions the exception and the new conditions are noted in the news lead or in conjunction with the price table by footnote or otherwise, for the particular refinery or sales district involved.

Crude oil and products covered by OILGRAM'S news and price service, except where noted, have been represented to the publisher as fully up to the customary trade specifications indicated and according to the generally accepted methods of test: and all crude oil and all products thereof as having been lawfully produced and transported.

Any apparent error should be reported to the nearest OILGRAM or National Petroleum News office at once as no correction will be made after the second issue of the OILGRAM or National Petroleum News following its publication.

NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads.

Summary of Daily Gasoline Prices (Apr. 21 to Apr. 27)

U. S. Motor, (ASTM octane)	**Monday Apr. 27**	**Friday Apr. 20**	**Thursday Apr. 23**	**Wednesday Apr. 22**	**Tuesday Apr. 21**
78 octane Ethyl:					
Oklahoma	6.375– 6.875	6.375– 6.875	6.375– 6.875	6.375– 6.875	6.375– 6.875
Mid-Western (Group 3 basis)	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75	6.5 – 6.75
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	6.5 – 6.625	6.5 – 6.625	6.5 – 6.625	6.5 – 6.625	6.5 – 6.625
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	6.625 (2)	6.625 (2)	6.625 (2)	6.625 (2)	6.625 (2)
72-74 octane:					
Oklahoma	5.5 – 6	5.5 – 6	5.5 – 6	5.5 – 6	5.5 – 6
Mid-Western (Group 3 basis)	5.5 – 6	5.5 – 6	5.5 – 6	5.5 – 6	5.5 – 6
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.5 – 5.75	5.5 – 5.75	5.5 – 5.75	5.5 – 5.75	5.5 – 5.75
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.625– 5.75	5.625– 5.75	5.625– 5.75	5.625– 5.75	5.625– 5.75
63-66 octane:					
Oklahoma	5.125– 5.625	5.125– 5.625	5.125– 5.625	5.125– 5.625	5.125– 5.625
Mid-Western (Group 3 basis)	5.125– 5.625	5.125– 5.625	5.125– 5.625	5.125– 5.625	5.125– 5.625
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.1 – 5.125	5.1 – 5.125	5.1 – 5.125	5.1 – 5.125	5.1 – 5.125
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.375 (1)	5.375 (1)	5.375 (1)	5.375 (1)	5.375 (1)
60 octane & below:					
Oklahoma	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
Mid-Western (Group 3 basis)	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.5 – 5	4.5 – 5	4.5 – 5	4.5 – 5	4.5 – 5
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.875– 5	4.875– 5	4.875– 5	4.875– 5	4.875– 5
Motor Gasoline, 72-74 octane (ASTM)					
New York harbor	8.8	8.8	8.8	8.8	8.8
New York harbor, barges	8.7 – 8.8	8.7 – 8.8	8.7 – 8.8	8.7 – 8.8	8.7 – 8.8
Philadelphia district	8.8	8.8	8.8	8.8	8.8
Baltimore district	8.55	8.55	8.55	8.55	8.55
Motor Gasoline:					
Western Penna. Bradford-Warren:					
"Q" Gasoline, Min. 70 Oct. (ASTM)	7.75 – 8.05	7.75 – 8.05	7.75 – 8.05	7.75 – 8.05	7.75 – 8.05
Western Penna. Other Districts:					
"Q" Gasoline, Min. 70 Oct. (ASTM)	7 – 7.5	7 – 7.5	7 – 7.5	7 – 7.5	7 – 7.5

REFINERY PRICES

Gasoline—U. S. Motor (ASTM) except where otherwise specified

Prices in Effect	**April 27**	**April 20**
OKLAHOMA		
78 oct. Ethyl	6.375– 6.875	6.375– 6.875
72-74 oct.	5.5 – 6	5.5 – 6
63-66 oct.	5.125– 5.625	5.125– 5.625
60 oct. & below	4.75 – 5.25	4.75 – 5.25
60-62 400 e.p.	4.75 (1)	4.75 (1)
MID-WESTERN (Group 3 basis)		
78 oct. Ethyl	6.5 – 6.75	6.5 – 6.75
72-74 oct.	5.5 – 6	5.5 – 6
63-66 oct.	5.125– 5.625	5.125– 5.625
60 oct. & below	4.75 – 5.25	4.75 – 5.25
N. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
78 oct. Ethyl	6.5 – 6.625	6.5 – 6.625
72-74 oct.	5.5 – 5.75	5.5 – 5.75
63-66 oct.	5.1 – 5.125	5.1 – 5.125
60 oct. & below	4.5 – 5	4.5 – 5
60-62, 400 e.p.	5 (1)	5 (1)
W. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
78 oct. Ethyl	6.625 (2)	6.625 (2)
72-74 oct.	5.625– 5.75	5.625– 5.75
63-66 oct.	5.375 (1)	5.375 (1)
60 oct. & below	4.875– 5	4.875– 5
CENT. W. TEX. (Prices to truck transports)		
80 oct. & above	6.875 (2)	6.875 (2)
72-74 oct.	5.875 (2)	5.875 (2)
67-69 oct.	5.375 (1)	5.375 (1)
62 oct. & below	5.125 (2)	5.125 (2)
AMARILLO, TEX. (For shpt. to W. Okla. & Tex. differential territory.)		
60 oct. & below	No Price	No Price
60-62, 400 e.p.	No Price	No Price
KANSAS (For Kansas destinations only)		
78 oct. Ethyl	7.125 (1)	7.125 (1)
72-74 oct.	5.875–6.2 (2)	5.875–6.2 (2)
63-66 oct.	5.5 –5.8 (2)	5.5 –5.8 (2)
60 oct. & below	5.125–5.4 (2)	5.125–5.4 (2)

Prices in Effect	**April 27**	**April 20**
ARK. (For shipment to Ark. & La.)		
72-74 oct., leaded	5.875 (1)	5.875 (1)
70-72 oct. "	5.5 (1)	5.5 (1)
62 oct. "	5.125 (1)	5.125 (1)
60 oct. & below, unleaded	5 (1)	5 (1)
WESTERN PENNA. (Motor gasoline)		
Bradford-Warren:		
"Q" Gasoline, Min. 70 Oct. (ASTM)	7.75 – 8.05	7.75 – 8.05
Other districts:		
"Q" Gasoline Min. 70 Oct. (ASTM)	7 – 7.5	7 – 7.5
CENTRAL MICHIGAN (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group.)		
U.S. Motor: (Oct. ASTM):		
72-74 oct.	8 – 8.5	8 – 8.5
67-69 oct.	7.5 –7.75 (2)	7.5 –7.75 (2)
Str. run gasoline, excluding Detroit shpt.	5 – 5.5	5 – 5.5
OHIO (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances)		
72-74 oct.	8.375	8.375
CALIFORNIA U.S. Motor:		
58-61 grav., 375-400 e.p., 65 oct. & above	5.25 – 8	5.25 – 8
54-58 grav., for outside state shipment	4.5 – 7	4.25 – 7
54-58 grav., for instate shipment	4.5 – 7	4.25 – 7

Kerosine, Gas & Fuel Oils

Prices in Effect	**April 27**	**April 20**
OKLAHOMA		
41-43 grav. w.w.	4.375– 4.5	4.375– 4.5
42-44 grav. w.w.	4.5	4.5
Range Oil	4 – 4.375	4 – 4.375
No. 1 P.W.	3.875– 4.25	3.875– 4.25
No. 1 straw	3.5 – 4	3.5 – 4
No. 2 straw	3.6 – 4.125	3.6 – 4.125
No. 3 fuel	3.5	3.5
U.S.G.I. Gas Oil	3.625 (1)	3.625 (1)
No. 6 fuel	$0.80–$0.90 (2)	$0.80–$0.90(2)
14-16 fuel	$0.95 (1)	$0.95 (1)
MID-WESTERN (Group 3 basis)		
41-43 grav. w.w.	4.375– 4.625	4.375– 4.625
42-44 grav. w.w.	4.5 (2)	4.5 (2)
Range Oil	4 (1)	4 (1)
No. 1 p.w.	3.875– 4.125	3.875– 4.125
No. 2 straw	3.6 – 3.625	3.6 – 3.625
No. 3	3.5	3.5
No. 5	$0.85 (1)	$0.85 (1)
No. 6	$0.80–$0.85 (2)	$0.80–$0.85 (2)
N. TEX. (For shpt. to Tex & N. M. dest'ns.)		
41-43 grav. w.w.	4.25 – 4.75	4.25 – 4.75
No. 1 P.W.	4.1 –4.2 (2)	4.1 –4.2 (2)
AMARILLO, TEX. (For shpt. to W. Okla. & Tex. differential territory.)		
41-43 grav. w.w.	No Price	No Price
No. 1 straw	4.3 (1)	4.3 (1)
KANSAS (For Kansas destinations only)		
41-43 grav. w.w.	No Price	No Price
42-44 gravity w.w.	4.8–4.875 (2)	4.8–4.875 (2)
No. 1 p.w.	4.25– 4.3 (2)	4.25–4.3 (2)
No. 6 fuel	$0.90 (1)	$0.90 (1)

REFINERY PRICES (Continued)

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)

NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads.

Kerosine, Gas & Fuel Oil

(Continued)

Prices In Effect	April 27	April 20
ARK. (For shipment to Ark. and La.)		
41-43 grav. w.w.	4.625 (1)	4.625 (1)
No. 1	4 (1)	4 (1)
No. 2	3.5 (1)	3.5 (1)
No. 3 fuel	3.5 (1)	3.5 (1)
Tractor fuel, for shpt. to Ark. points only.	4.875 (1)	4.875 (1)
WESTERN PENNA.		
Bradford-Warren:		
45 grav. w.w.	6.25 – 6.65	6.25 – 6.65
46 grav. w.w.	6.5 (1)	6.5 (1)
No. 1 fuel	6.5 – 6.65	6.5 – 6.65
No. 2 "	6.125– 6.525	6.125– 6.525
No. 3 "	6.5 –6.65 (2)	6.5 –6.65 (2)
36-40 gravity	6.25 – 6.5	6.25–6.5 (2)
Other districts:		
45 grav. w.w.	6.25 – 6.525	6.25 – 6.525
46 grav. w.w.	6.25 – 6.525	6.25 – 6.525
47 grav. w.w.	6.375– 6.65	6.375– 6.65
No. 1 fuel	5.875– 6.25	5.875– 6.25
No. 2 "	5.75 – 6.125	5.75 – 6.125
No. 3 "	5.75 – 6.125	5.75 – 6.125
36-40 grav., Pittsburgh dist. prices excluded	5.75 – 6.125	5.75 – 6.125
CENTRAL MICHIGAN (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group.)		
47-49 gravity w.w.	5.5 – 6	5.5 – 6
P.W. Distillate	5.5	5.5
No. 3 gas oil, Straw.	5 – 5.3	5 – 5.3
U.G.I. gas oil	4.5 (2)	4.5 (2)
Fuel Oils (Vis. at 100).		
300-500 Vis.	4 (2)	4 (2)
100–300 Vis	4.5 (2)	4.5 (2)
OHIO (S. O. quotations for statewide delivery)		
Kerosine	7	7
CALIFORNIA		
40-43 grav. w.w.	4.5 – 6	4.5 – 6
San Joaquin Valley:		
Heavy fuel	$0.75 –$0.85	$0.75 –$0.85
Light fuel	$0.80 –$0.95	$0.80 –$0.95
Diesel fuel	2.75 – 4	2.75 – 4
Stove dist.	2.75 – 5	2.75 – 5
Los Angeles:		
Heavy fuel	$0.75 –$0.85	$0.75 –$0.85
Light fuel	$0.80 –$0.95	$0.80 –$0.95
Diesel fuel	2.75 – 4	2.75 – 4
Stove dist.	2.75 – 5	2.75 – 5
San Francisco:		
Heavy fuel	$0.90	$0.90
Light fuel	$1.00	$1.00
Diesel fuel	4.5	4.5
Stove dist.	5.5	5.5

Note: All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200 and stove distillate, spec. 100.

Lubricating Oils

WESTERN PENNA.

Prices are for sales made, or offers reliably reported, to jobbers & compounders only.

Viscous Neutrals— No. 3 col. Vis. at 70° F.

200 Vis. (180 at 100°) 420-425 fl.		
0 p.t.	40.5 (1)	40.5 (1)
10 p.t.	39.5 (1)	39.5 (1)
15 p.t.	38.5 (1)	38.5 (1)
25 p.t.	33	33
150 Vis. (143 at 100°) 400-405 fl.		
0 p.t.	38.5 (1)	38.5 (1)
10 p.t.	37.5 (1)	37.5 (1)
15 p.t.	36.5 (1)	36.5 (1)
25 p.t.	31	31
Cylinder Stocks		
Brt. stk., 145-155 vis. at 210°, 540-550 fl., No. 8 col.		
10 p.t.	30.5 (1)	30.5 (1)
15 p.t.	29.5 (1)	29.5 (1)
25 p.t.	25	25
600 S.R. filterable	15	15
650 S.R.	15.5	15.5
600 fl.	16	16
630 fl.	17	17
MID-CONTINENT (F. o. b. Tulsa)		
Neutral Oils (Vis. at 100° F. 0 to 10 P.P.)		
Pale Oils:		
Vis. Color		
60-85—No. 2	8	8
86-110—No. 2	8.5	8.5
150—No. 3	14.5	14.5
180—No. 3	15	15
200—No. 3	15	15
250—No. 3	16–16.5	16–16.5
280—No. 3	17	17
300—No. 3	18	18

Lubricating Oils (Cont'd)

Prices In Effect	April 27	April 20
Red Oils:		
180—No. 5	15 (1)	15 (1)
200—No. 5	15 (1)	15 (1)
280—No. 5	No Price	No Price
300—No. 5	17.5 (2)	17.5(2)

Note: Viscous Neutrals, 15-25 p.p. generally are quoted 0.5c under 0-10 p.p. oils. Non-viscous oils, 15-25 p.p., generally are quoted 0.25c under 0-10 p.p. oils.

Bright Stock—Vis. at 210°		
200 Vis. D	27 (1)	27 (1)
150-160 Vis. D:		
0 to 10 p.p.	23	23
10 to 25 p.p.	22.5–23	22.5–23
25 to 40 p.p.	23 (1)	23 (1)
150-160 Vis. E	22 (2)	22 (2)
120 Vis. D:		
0 to 10 p.p.	22 (2)	22 (2)
600 S.R. Dark Green	8.5 (1)	8.5 (1)
600 S.R. Olive Green	10–11	10–11
631 S.R.	18.5 (1)	18.5 (1)
Black Oil	5.5(1)	5.5 (1)

SOUTH TEXAS Neutral Oils

Vis. Color		
Pale Oils: (*Vis. at 100° F.*)		
100 No. 1½-2½	6.5	6.5
200 No. 2-3	8.75	8.75
300 No. 2-3	9.25	9.25
500 No. 2½-3½	10	10
750 No. 3-4	10.25	10.25
1200 No. 3-4	10.375	10.375
2000 No. 4	10.5	10.5
Red Oils:		
100 No. 5-6	6.5 (2)	6.5 (2)
200 No. 5-6	8.75	8.75
300 No. 5-6	9.25	9.25
500 No. 5-6	10	10
750 No. 5-6	10.25	10.25
1200 No. 5-6	10.375	10.375
2000 No. 5-6	10.5–11.5	10.5–11.5

CHICAGO (From Mid-Continent p.l. crude.)

Neutral oils (Vis. at 100° F. 0 to 10 p.p.)

Pale Oils

Vis. Color		
60-85—No. 2	9.5 (1)	9.5 (1)
86-110—No. 2	10 (1)	10 (1)
150—No. 3	15.5 (1)	15.5 (1)
180—No. 3	16 (1)	16 (1)
200—No. 3	16 (1)	16(1)
250—No. 3	17 (1)	17 (1)
Red Oils:		
180—No. 5	16 (1)	16 (1)
200—No. 5	16 (1)	16 (1)
250—No. 5	17 (1)	17 (1)
280—No. 5	18 (1)	18 (1)
300—No. 5	18.5 (1)	18.5 (1)

Note: Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower.

Unfiltered Steam Refined: (Viscosity at 210°)		
140	11.5 (1)	11.5 (1)
160	12.5 (1)	12.5 (1)
200	13.5 (1)	13.5 (1)
Bright stocks, 160 vis. at 210 No. 8 color:		
0 to 10 p.p.	24 (1)	24 (1)
15 to 25 p.p.	23.5 (1)	23.5 (1)
30 to 40 p.p.	21.5 (1)	21.5 (1)
E filtered Cyl. Stock	15.5 (1)	15.5 (1)

Note: To obtain prices delivered in Chicago, add 0.25c per gal.

Natural Gasoline

(Group 3 & Breckenridge prices are to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

FOB GROUP 3

Grade 26-70 ..... 2.25-2.375 (Qtns.) 2.25-2.375 (Qtns.)

FOB BRECKENRIDGE

Grade 26-70 ..... 2 (Qtns.) 2 (Qtns.)

CALIFORNIA (FOB plants in Los Angeles basin)

75-85, 350-375 e.p. for blending	4.75 – 5.375	4.75 –5.375

Naphtha and Solvent

Prices in Effect	April 27	April 20
(FOB Group 3)		
Stoddard solvent	6.625	6.625
Cleaners' naphtha	7.125	7.125
V. M. & P. naphtha	7.125	7.125
Mineral spirits	6.125	6.125
Rubber solvent	7.125	7.125
Lacquer diluent	7.375– 8.125	7.375– 8.125
Benzol Diluent	7.875– 8.625	7.875– 8.625
WESTERN PENNA.		
Bradford-Warren District:		
Stoddard Solvent	7.5 (1)	7.5 (1)
Other Districts:		
Untreated naphtha	7 (2)	7 (2)
Stoddard solvent	7.25 – 7.75	7.25 – 7.75
OHIO (S. O. quotations for statewide delivery):		
V.M.&P. naphtha, D.C. naphtha, Varnolene & Sohio solvent	10	10
Rubber solvent	9	9

Wax

White Crude Scale:

WESTERN PENNA. (Bbls. C.L.)		
122-124 A.m.p.	4.25	4.25
124-126 A.m.p.	4.25	4.25
OKLAHOMA (C.L., FOB Refinery)		
Semi-refined:		
128 AMP min., white, 50 kilo bags	No Price	No Price
132-134 AMP, bbls.	5.25 (1)	5.25 (1)

CHICAGO (FOB Chicago district refinery of one refiner, in bags, carloads. Carloads, slabs loose 0.4c less. Melting points are EMP (ASTM) methods; add 3° to convert into AMP.)

Fully refined:		
122-124 (bags only)	5.6	5.6
125-127	6	6
127-129	6.25	6.25
130-132	6.55	6.55
132-134	6.8	6.8
135-137	7.55	7.55

Petrolatums

WESTERN PENNA. (Bbls., carloads; tank cars, 0.5c per lb. less.)		
Snow White	6.125– 7.25	6.125– 7.25
Lily White	5.375– 6.125	5.375– 6.125
Cream White	4.375– 5.375	4.375– 5.375
Light Amber	3.375– 3.875	3.375– 3.875
Amber	3.125– 3.625	3.125– 3.625
Red	3 – 3.5	3 – 3.5

Group 3 Freight Rates

To Division Headquarters Points of Standard Oil Co. of Indiana

(Cents Per Gal.)

	Gasoline Kerosine	*Distillate Fuel Oil	Gas Oil and or Residual Fuel Oil
Chicago, Ill.	2.508	2.508	2.516
Decatur, Ill.	2.244	2.244	2.442
Joliet, Ill.	2.508	2.508	2.516
Peoria, Ill.	2.310	2.310	2.442
Quincy, Ill.	2.178	2.178	2.294
Indianapolis, Ind.	2.640	3.034	3.034
Evansville, Ind.	2.442	2.886	2.886
South Bend, Ind.	3.135	3.135	3.330
Detroit, Mich.	4.290	3.996	3.996
Grand Rapids, Mich.	3.828	3.828	3.922
Saginaw, Mich.	4.290	4.144	4.144
Green Bay, Wis.	2.838	2.838	3.182
Milwaukee, Wis.	2.706	2.706	2.738
La Crosse, Wis.	2.574	2.574	2.886
Minneapolis-St. Paul	2.574	2.574	2.886
Duluth, Minn.	2.838	2.838	3.256
Mankota, Minn.	2.574	2.574	2.886
Des Moines, Ia.	2.046	2.046	2.294
Davenport, Ia.	2.310	2.310	2.442
Mason City, Ia.	2.376	2.376	2.664
St. Louis, Mo.	2.046	2.046	2.072
Kansas City, Mo.	1.518	1.518	1.776
St. Joseph, Mo.	1.518	1.518	1.776
Fargo, N. D.	3.564	3.564	3.996
Huron, S. D.	3.036	3.036	3.330
Wichita			
From Ponca City	0.528	0.528	0.592
From Tulsa	0.858	0.858	0.962
From Cushing	0.792	0.792	0.888

*Not suitable for illuminating purposes.

SEABOARD PRICES EXPORT AND COASTWISE

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)

NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads

Atlantic Coast

(Prices are of refiners, FOB their refineries & their tanker terminals, & of tanker terminal operators FOB their terminals)—Prices In Effect Apr. 27

MOTOR GASOLINE

District:	Min. 80 Oct. '39 Research (Max. 2 cc. Lead)	72-74 Oct. (ASTM)	68-70 Oct. (ASTM)
N. Y. Harb.	9.3 – 9.8	8.8	8.8 (1)
N. Y. Harb., barges	9.3(1)	8.7 – 8.8	8.7 (1)
Albany	8.9 (2)	8.9 –9.1 (2)	....
Philadelphia	9.05 – 9.3	8.8	8.8(1)
Baltimore	8.55 (2)	8.55	8.45 (1)
Norfolk	8.42 – 8.55	8.3 – 8.375	8.1 (2)
Wilmington, N. C.	8.3 – 8.4	8.3 – 8.375	8 –8.1(2)
Charleston	8.4 – 8.55	8.3(1)	7.7 –8 (2)
Savannah	8 –8.5 (2)	7.7 – 8.375	7.6 (1)
Jacksonville	7.875– 8.5	7.75 – 8	7.6–7.875 (2)
Miami	7.875–8.5 (2)	....	7.5 (1)
Tampa	7.75 – 8.5	7.5 – 8	7.6–7.875 (2)
Pensacola	7 –7.2 (1)	....	6.6 –6.8 (1)
Mobile	7 –7.5 (2)	7 –7.375(2)	6.6 –6.8 (1)
New Orleans	6.75–7.37 (2)	6.25 – 7	....
Portland	9.1 – 9.4	9.1 – 9.4	....
Boston	9 – 9.3	9 – 9.3	9.3 (1)
Providence	9 – 9.3	9 – 9.3	....

FUEL OILS

	KEROSINE and/or NO. 1 FUEL	No. 2	No. 3	No. 5	No. 6
N. Y. Harb.	5.7	5.6	5.6	$1.85–$2.00 (a)	$1.55
N. Y. Harb., barges	5.6	5.5	5.5	....	....
Albany	5.9	5.7	5.7	$2.15 (1)	$1.75 (1)
Philadelphia	5.8	5.6	5.6	$1.88 (2)	$1.55
Baltimore	5.8	5.6	5.6	....	$1.55
Norfolk	5.7 – 5.8	5.6	5.6 (1)	....	$1.55 (2)
Wilmington, N. C.	5.65	5.6	....	....	....
Charleston	5.8	5.6 (2)	....	....	$1.50 (2)
Savannah	5.25 – 5.65	....	....	....	$1.50 (1)
Jacksonville	5.25 – 5.65	5.15 (2)	5.15 (1)	....	$1.50 (1)
Miami	5.65 (2)	....	....	....	....
Tampa	5.25 – 5.65	5.15 (2)	....	....	$1.45 (1)
Pensacola	4.8 (1)	....	....	....	....
Mobile	4.75	....	....	....	....
New Orleans	4.25 – 4.875	3.75 –3.875 (2)	....	$1.25 (1)	$0.85 (2)
Portland	5.9	5.7	5.7 (2)	$2.15 (1)	$1.55 (2)
Boston	5.8	5.6	5.6 (2)	$1.85 (2)	$1.55
Providence	5.8	5.6	5.6	$1.80 –$1.85	$1.55

(a) This price is for a straight-run, low pour test No. 5 fuel.

	Bunker C Fuel Ships' bunkers (Ex Lighterage)	Diesel Oil Ships' bunkers (Ex Lighterage)	Diesel Oil Shore Plants	Gas House Gas Oil 28-34 Gravity
N. Y. Harbor	$1.55	$2.318	5.6 –5.7 (2)	5.7 (2)
Albany	$1.75 (1)	$2.518 (1)	5.7 (2)	5.9 (1)
Philadelphia	$1.55	$2.318	....	....
Baltimore	$1.55	$2.318	5.6 (1)	5.6 (1)
Norfolk	$1.55	$2.318	5.6 (1)	5.6 (1)
Charleston	$1.50	$2.318 (2)	5.6 (1)	5.6 (1)
Savannah	$1.50 (1)	$2.158 (1)	....	....
Jacksonville	$1.50 (2)	$2.158-2.163 (2)	....	....
Tampa	$1.45 (2)	$2.158-2.163 (2)	....	....
New Orleans	$0.85	$1.55 (2)	3.75 (1)	3.75 (1)
Portland	$1.55 (2)	$2.418 (2)	5.7 (1)	5.8 (1)
Boston	$1.55	$2.318	5.6 (2)	5.7 (2)
Providence	$1.55	$2.318 (2)	5.6 (1)	5.7 (1)

Wax

(Melting points are AMP, 3° higher than EMP. Export prices FAS c.l. Domestic prices FOB, in bags, c.l. Scale solid; fully refined slabs.)

Prices in Effect April 27

Crude Scale:	New Orleans Export	N. Y. Domestic	N. Y. Export
124-6 Yellow	4.65 (1)	....	4.65 (1)
122-4 White	....	No Price	No Price
124-6 White	4.65 (1)	No Price	4.65 (1)
Fully Refined:			
123-5	5.6 (1)	5.6 (1&a)	5.6 (1)
125-7	5.6 (1)	5.6 (1&a)	5.6 (1)
128-30	6 (1)	6 (2)	6 (1)
130-32	6.25 (1)	6.25 (1)	6.25 (1)
133-5	6.55 (1)	6.55 (2)	6.55 (1)
135-7	6.8 (1)	6.8 (1)	6.8 (1)
108-11 White Match wax (tight bbls.)			No Price

(a) 0.4c discount generally given for slabs loose.

Naphtha

Prices In Effect April 27

	V.M.&P. Naphtha	Mineral Spirits
Baltimore	10.5 (2)	9.5
New York Harbor	11 (2)	10
Philadelphia district	11 (2)	10
Boston	11.5 (2)	10.5
Providence	11.5 (1)	10.5 (2)

Pacific Export

(Quotations at seaboard, Los Angeles, cargo lots, except where otherwise noted.)

Prices In Effect	Apr. 27	Apr. 20
375 e.p. blend, 70 oct.	6.375– 6.5	6.375– 6.5
390 e.p. blend, 68 oct.	6.25 – 6.375	6.25 – 6.375
390 e.p. blend, 66 oct.	5.875– 6	5.875– 6
400 e.p. blend, 65 oct. min.	5.875– 6	5.875– 6
U. S. Motor, under 65 octane	5.625	5.625
38-40 grav., w.w. kero., 150 fire point	4.5 – 5	4.5 – 5
41-43 grav., w.w. kero.	4.75 – 5	4.75 – 5
44-grav. w.w. kero.	5 – 5.5	5 – 5.5
Diesel fuel, 24 & above	$1.25 –$1.30	$1.25 –$1.30
Diesel fuel, under 24	$1.15 –$1.25	$1.15 –$1.25
30-34 grav. diesel (gas oil) Pac. Spec. 200	$1.25 –$1.35	$1.25 –$1.35
Grade C fuel, Pac. Spec. 400	$0.85 –$0.90	$0.85 –$0.90
In Ship's Bunkers, or deep tank lots:		
Diesel fuel, Pac. Spec. 200	$1.35 –$1.45	$1.35 –$1.45
Grade C fuel, Pac. Spec. 400	$0.85 –$0.90	$0.85 –$0.90
Cased Goods: (Per case)		
375-400 e.p. blend, 65 oct. & above	$1.50 –$1.60	$1.50 –$1.60
400 e.p. blend, under 65 oct.	$1.40 –$1.50	$1.40 –$1.50
U. S. Motor	$1.35 –$1.45	$1.35 –$1.45
40-43 grav. w.w. kero., 150 fire point	$1.30 –$1.40	$1.30 –$1.40
Kero., p.w.	$1.25 –$1.35	$1.25 –$1.35

Tanker Rates

(Approximate last paid rates, cents per bbl.; Gulf-N. Atlantic, not East of N. Y.)

Hvy. Crude & Fuel (10 to 19.9 gravity)	48
Light Crude, (30 grav. or Lighter)	43
Gasoline	40
Kerosine	40
No. 2 Fuel	42

Note: 200% surcharge permitted on above rates by War Shipping Administration "to cover increased wartime operating expenses."

Gulf Coast

(Prices for sales made or firm offers reliably reported for sales pending in cargoes FOB ship at Gulf, for minimum of 20,000 bbls. Prices are by refiners only to other refiners, export agents, or to large tanker terminal operators at the customary trade specifications noted.)

Prices In Effect Apr. 27

Domestic

Motor Gasoline	
Min. 80 oct. '39 Research, max. 2cc lead	5.5
60-62 Gravity, Max. 400 e.p.	
72-74 oct. leaded (ASTM)	5.25 – 6
70 oct. unleaded " "	5.25 – 5.75
68 oct. " "	5.25 – 5.875
65 oct. " "	5.25 – 5.75
60 oct. " "	5
41-43 w.w. kerosine	3.875– 4.375
No. 2 fuel	3.75 – 4
Gas Oil—Less than ½ of 1% sulfur.	
Below 43 diesel index	4
43-47 " "	4
48-52 " "	4
53-57 " "	4.125
58 & above diesel index	4.25
Diesel Oil, ship's bunkers (ex-lighterage)	$1.55–$1.68
Bunker C, " " "	$0.85–$0.95
Bunker C, cargoes	$0.85

Export

Motor Gasoline	
60-62 Gravity, Max. 400 e.p.	
72-74 oct. leaded (ASTM)	5.25 – 6
70 oct. unleaded " "	5.25 – 5.75
68 oct. " "	5.25 – 5.875
65 oct. " "	5.25 – 5.75
60 oct. " "	5
41-43 w.w. kerosine	3.875– 4.375
Gas Oil—Less than ½ of 1% sulfur.	
Below 43 diesel index	4
43-47 " "	4
48-52 " "	4
53-57 " "	4.125
58 & above diesel index	4.25

MID-CONTINENT LUBES

(At Gulf; in packages, FAS.; in bulk, FOB terminals)

	Apr. 27 Steel Drums	Bulk
200 vis. D 210 brt. stock	34–35 (2)	28.8 (2)
150 vis. D 210 brt. stock 0-10 p.p.	30-31 (2)	24.8 (2)
10-25 p.p.	29.5 (1)	24.3 (1)
100 vis. D 210 brt. stock 0-10 p.p.	29.5 (1)	24.3 (1)
10-25 p.p.	29 (1)	23.8 (1)
200 vis. No. 3 col. neutral: 0-10 p.p.	22 (1)	16.8 (1)

SOUTH TEXAS LUBES

(Vis. at 100°, c. t. 0, blk. exprt. shp., FOB terminals)

Unfiltered Pale Oils: Vis. Color	Apr. 27	Apr. 20
100 No. 3	6.25 (1)	6.25 (1)
200 No. 3	7.75 (1)	7.75 (1)
300 No. 3	8.25 (1)	8.25 (1)
500 No. 3½	9.25 (1)	9.25 (1)
750 No. 4	9.75 (1)	9.75 (1)
1200 No. 4	10.25 (1)	10.25 (1)
2000 No. 4	....	....
Red Oils:		
Vis. Color		
100 No. 5-6	....	....
200 No. 5-6	7.75 (1)	7.75 (1)
300 No. 5-6	8.25 (1)	8.25 (1)
500 No. 5-6	9.25 (1)	9.25 (1)
750 No. 5-6	9.75 (1)	9.75 (1)
1200 No. 5-6	10.25 (1)	10.25 (1)
2000 No. 5-6	11 (1)	11 (1)

TANK WAGON PRICES

Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline ***do not include taxes****; they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1.5c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes. These prices in effect Apr. 27, 1942 as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

S. O. New Jersey

Esso (*Regular Grade*)

	Consumer Tank Wagon	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
*Atlantic City, N. J.	9.8	10.3	4.5	8.3
*Newark, N. J.	9.8	10.3	4.5	8.3
Annapolis, Md.	10.15	10.65	5.5	10.1
Baltimore, Md.	9.55	10.05	5.5	9.1
Cumberland, Md.	10.95	11.45	5.5	10.6
Washington, D. C.	9.8	10.3	4.5	9.6
Danville, Va.	11.25	11.75	6.5	10.85
Norfolk, Va.	10.05	10.55	6.5	10.6
Petersburg, Va.	10.15	10.85	6.5	11.6
Richmond, Va.	10.35	10.85	6.5	11.6
Roanoke, Va.	11.55	12.05	6.5	11.1
Charleston, W. Va.	11.85	12.35	6.5	11.9
Parkersburg, W. Va.	11.15	11.65	6.5	11.6
Wheeling, W. Va.	11.15	11.65	6.5	12.2
Charlotte, N. C.	11.7	12.2	7.5	9.9
Hickory, N. C.	12.25	12.75	7.5	10.9
Mt. Airy, N. C.	12.1	12.6	7.5	10.1
Raleigh, N. C.	11.45	11.95	7.5	10.9
Salisbury, N. C.	11.75	12.25	7.5	11.3
Charleston, S. C.	10.55	11.05	7.5	....
Columbia, S. C.	11.4	11.9	7.5	....
Spartanburg, S. C.	12.1	12.6	7.5	....

	Mineral Spirits T.W.	V.M.&P. T.W.
Newark, N. J.	13	14.5
Baltimore, Md.	15.5	....
Washington, D. C.	15.5	....

Fuel Oils—T.W.	No. 1	No. 2	No. 3
Atlantic City, N. J.	8.3	7.6	7.6
Newark	8.3	7.6	7.6
Annapolis, Md.	...	7.85	...
Baltimore	8.1	7.6	7.6
Washington, D. C.	8.6	8	8
Norfolk, Va.	8.3	7.4	7.4
Petersburg	8.6	7.6	...
Richmond	8.6	7.6	7.6
Charlotte, N. C.	8.9	9	...
Hickory	...	8.6	...
Raleigh	9.9	8.7	...
Charleston, S. C.	...	7.6	...
Columbia	...	8.6	...
Spartanburg	...	9.4	...

*Effective Mar. 26, '42, minimum retail resale price of 13.8c posted thru New Jersey.

Discounts:

Esso gasoline—to undivided dealers, 0.5c off dealer t.w.

Kerosine—1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore city contract not necessary) except no discount in state of New Jersey.

Naphthas—To buyers taking following quantities at one time: Newark, 2c per gal. on 200 gals. or more, less than 200 gals. 0.5c higher price; Baltimore, 2c off on 25 to 100 gals. and 3c on over 100 gals.; Washington, 2c off to contract buyers.

Socony-Vacuum Oil Co., Inc.

Socony Mobilgas (*Regular Grade*)

	Com. Cons. T.W.	Undiv. Dlr. T.W.	Gasoline Taxes
New York City			
Manhattan & Bronx	9.7	10.2	*5.5
Kings & Queens	9.7	10.2	*5.5
Richmond	9.3	9.8	*5.5
Albany, N. Y.	9.5	10	5.5
Binghamton, N.Y.	10.6	11.1	5.5
Buffalo	9.8	10.3	5.5
Jamestown, N.Y.	10	10.5	5.5
Mt. Vernon, N. Y.	9.7	10.2	5.5
Plattsburg, N. Y.	10.6	11.1	5.5
Rochester, N. Y.	10.4	10.9	5.5
Syracuse, N.Y.	10.1	10.6	5.5
Bridgeport, Conn.	9.6	10.1	4.5
Danbury, Conn.	10.1	10.6	4.5
Hartford, Conn.	10.2	10.7	4.5
New Haven, Conn.	9.6	10.1	4.5
Bangor, Me.	10.3	10.8	5.5
Portland, Me.	9.9	10.4	5.5
Boston, Mass.	9.5	10	4.5
Concord, N. H.	11	11.5	5.5
Lancaster, N.H.	11.6	12.1	5.5
Manchester, N. H.	10.9	11.4	5.5
Providence, R. I.	9.6	10.1	4.5
Burlington, Vt.	10.5	11	5.5
Rutland, Vt.	10.6	11.1	5.5

	Mineral Spirits T.W.	V.M.&P. T.W.
Buffalo, N. Y.	12.4	13.6
New York City	11	12
Rochester, N. Y.	13.2	14.4
Syracuse, N. Y.	14	....
Boston, Mass.	12	13
Bridgeport, Conn.	†16.3	†17.3
Hartford, Conn.	†16.3	†17.3
Providence, R. I.	13	14

	Kerosine Yard	Kerosine TW	Mobilfuel Diesel TC	Mobilfuel Diesel TW	Mobilheat Fuel Yard	Mobilheat Fuel TW
New York:						
Manhat'n & Bronx	6	8.4	...	7.9	5.9	7.6
Kings & Queens	6	8.4	...	7.9	5.9	7.6
Richmond	5.9	8.4	...	...	5.8	7.4
Albany	6.1	8.1	5.9	7.9	5.9	7.6
Binghamton	7.5	9.5	...	9.3	7.3	8.8
Buffalo	7.2	9.2	7.1	9.1	7.1	8.6
Jamestown	7.3	9.3	...	9.2	7.2	8.6
Mt. Vernon	6.1	8.6	...	8	6	7.6
Plattsburg	6.7	8.7	...	8.5	6.5	8
Rochester	7.3	9.3	6.8	8.8	6.8	8.3
Syracuse	7.1	9.1	6.7	8.7	6.7	8.2
Conn.:						
Bridgeport	6.2	...	...	...	6.1	7.4
Danbury	6.7	...	...	...	6.4	7.4
Hartford	6.3	...	...	8.1	6.1	7.6
New Haven	6	...	...	7.9	5.9	7.5
Maine:						
Bangor	6.5	8.5	6.3	8.3	6.3	7.7
Portland	6.1	8.5	5.9	7.9	5.9	7.6
Mass.:						
Boston	6.2	8.4	5.8	7.8	6	7.6
N. H.:						
Concord	7	9	...	...	7.1	8.6
Lancaster	8.1	10.1	...	...	8.1	9.6
Manchester	7.1	9.4	...	...	6.8	8.3
R. I.:						
Providence	6.2	8.2	5.8	7.8	6	7.5
Vermont:						
Burlington	6.7	...	6.4	8.4	6.4	7.8
Rutland	6.9	...	...	8.6	6.6	8.1

*Does not include 1% city sales tax applicable to price of gasoline (ex tax).

†In steel barrels.

Discounts: Diesel—On t.w. deliveries, 0.5c for at least 400 gals.; 1c for full tank truck.

Atlantic Refining

Atlantic White Flash Gasoline (*Regular Grade*)

	Commercial T.W.	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Philadelphia, Pa.	9.8	10.3	5.5	10.55
Pittsburgh	10.3	10.8	5.5	10.9
Allentown	10.3	10.8	5.5	10.9
Erie	10.3	10.8	5.5	10.9
Scranton	10.3	10.8	5.5	10.9
Altoona	10.3	10.8	5.5	10.9
Emporium	10.3	10.8	5.5	10.9
Indiana	10.3	10.8	5.5	10.9
Uniontown	10.3	10.8	5.5	10.9
Harrisburg	10.3	10.8	5.5	10.9
Williamsport	10.3	10.8	5.5	10.9
Dover, Del.	....	10.8	5.5	10.9
Wilmington, Del.	....	10.3	5.5	10.4
Boston, Mass.	....	10.5	4.5	8.4
Springfield, Mass.	....	11.4	4.5	9.3
Worchester, Mass.	....	11.1	4.5	8.9
Fall River, Mass.	....	10.6	4.5	9.0
Hartford, Conn.	....	11.2	4.5	8.3
New Haven, Conn.	....	10.6	4.5	9.4
Providence, R. I.	....	10.6	4.5	9
Atlantic City, N. J.	....	10.3	4.5	8.3
Camden, N. J.	....	10.3	4.5	8.3
Trenton, N. J.	....	10.3	4.5	8.3
Annapolis, Md.	....	10.65	5.5	9.1
Baltimore, Md.	....	10.05	5.5	8.1
Hagerstown, Md.	....	11.15	5.5	8.6
Richmond, Va.	....	10.85	6.5	10.6
Wilmington, N. C.	....	11.15	7.5	10.2
Brunswick, Ga.	....	10	7.5	*9.4
Jacksonville, Fla.	....	9	8.5	10.4

	Mineral Spirits T.W.†	V.M.&P. T.W.†
Philadelphia, Pa.	11	12.5
Lancaster, Pa.	12	13.5
Pittsburgh, Pa.	12.5	13.5

Fuel Oils—T.W.	1	2	3	5	6
Phila., Pa.	8.4	7.6	7.6	5.2	4.2
Allentown, Pa.	8.9	7.9	7.9	...	...
Wilmington, Del.	8.4	7.6	7.6	...	...
Springfield, Mass.	9.3	8	8	...	...
Worchester, Mass.	8.9	7.9	7.9	...	...
Hartford, Conn.	8.3	7.6	7.6	...	...

*Does not include 1c Georgia kerosine tax.

†Mineral Spirits prices also apply to Stoddard Solvent; V.M.&P. prices also apply to Light Cleaners Naphtha.

Discounts:

Gasoline—to undivided dealers, 0.5c off dealer t.w., except Georgia & Florida dealer t.w. and undivided dealer t.w. prices are same.

Kerosine—Thru Penna. & Delaware, 2c off t.w. price on t.w. deliveries of 25 gals. or more at one time.

S. O. Ohio††

***Sohio X-70 Gasoline (*Regular Grade*)**

	Consumer T.W.	**Resellers	Gasoline ‡S.S. Taxes	†Kerosine T.W.
Ohio, Statewide	12	10	13.5	5.5	9
Akron	12	9.5	12.5	5.5	9
Cincinnati	12	9.5	12.5	5.5	9
Cleveland	12	9.5	12.5	5.5	9
Columbus	12	9.5	12.5	5.5	9
Dayton	12	9.5	12.5	5.5	9
Marietta	12	9.5	12.5	5.5	9
Portsmouth	12	9.5	12.5	5.5	9
Toledo	12	9.5	12.5	5.5	9
Youngstown	12	9.5	12.5	5.5	9

Aviation Gasoline—Statewide

	Consumer T.W.	Gasoline Taxes
Sohio Aviation	14.5	5.5
Esso Ethyl Aviation 73 Oct.	15.5	5.5
Esso Ethyl Aviation 80 Oct.	16.5	5.5
Esso Ethyl Aviation 91 Oct.	17.5	5.5
Esso Ethyl Aviation 100 Oct.	24.5	5.5

†Naphtha—T.W.

	Statewide	Lucas County
S. R. Solvent	13.5	13.5
D. C. Naphtha	14.5	14.25
V.M.&P. Naphtha	14.5	14.25
Varnolene	14.5	14.25
Sohio Solvent	14.5	14.25

Fuel Oils—T.W.	No. 1	No. 2	No. 3	No. 4
Ohio, Statewide	8	8	7.5	....
Cleveland	10	10	9.5	7.25

*Renown (third-grade) prices are same as X-70 unless otherwise noted.

**Except authorized agents.

†Kerosine prices are ex 1c state tax. Naphtha prices are ex 1.5c federal & 4c state tax.

‡Prices at company-operated stations.

††Statewide prices are subject to exceptions other than those shown.

Discounts:

Esso aviation—on contract to hangar operators and resellers, 2c off consumer t.w.

Fuel oils—Statewide prices are for t.w. & drum deliveries of 50 gals. or more; prices for deliveries of less than 50 gals. are 0.5c higher. Cleveland Nos. 1, 2, and 3 prices are for bulk deliveries of 5 to 99 gals.; 100 gals. and over are 2c less. Cleveland No. 4 price is for full compartment hose dump only.

Naphthas—to contract consumers off t.w. prices—Statewide: 300 to 999 gals., 0.5c; 1000 to 2499 gals., 0.75c; 2500 to 4999 gals., 1c; 5000 or more gals., 1.5c. Lucas County: Less than 50 gals., tank wagon price; 50 to 249 gals., 0.5c; 250 to 499 gals., 1c; 500 gals or over, 1.5c.

S. O. Kentucky

Crown Gasoline (*Regular*)
Standard (*Third Grade*)

	†Net Dealer Crown	Standard	Gasoline Taxes	Kerosine T.W.
Covington, Ky.	9.5	8.5	6.5	9
Lexington, Ky.	11	8.5	6.5	9
Louisville, Ky.	10.5	9.5	6.5	8.5
Paducah, Ky.	8	8	6.5	8.5
Jackson, Miss.	10.5	9.5	7.5	*8.5
Vicksburg, Miss.	10	9	7.5	*8
Birmingham, Ala.	10.5	9.5	*8.5	9
Mobile, Ala.	9.5	7.5	*9.5	8.5
Montgomery, Ala.	10.5	9.5	*9.5	*9
Atlanta, Ga.	10	....	7.5	*9
Augusta, Ga.	11	....	7.5	*8.5
Macon, Ga.	11	....	7.5	*8.5
Savannah, Ga.	10	....	7.5	*8
Jacksonville, Fla.	10	9	8.5	8
Miami, Fla.	10	9	8.5	8
Pensacola, Fla.	9.5	8.5	*9.5	8
Tampa, Fla.	10	....	8.5	8

*Taxes: In tax column are included these city and county gasoline taxes: Mobile, 2c city; Birmingham, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have 1c kerosine tax, Mississippi 0.5c, not included in above prices.

†Consumer t.w. prices are same as net dealer prices.

S. O. Indiana

Red Crown (*Regular Grade*)
Blue Crown (*Third Grade*)
Dealer Prices

	Red Crown Cons. T.W	Red Crown	Blue Crown	Gasoline Taxes	Kerosine T.W.
Chicago, Ill.	10.9	8.9	8.4	4.5	10.3
Decatur, Ill.	10.9	8.9	8	4.5	9.5
Joliet, Ill.	11.9	9.6	8.5	4.5	10.3

(Continued on next page)

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon:
Alabama 1/40c on gasoline, 1/2c on kerosine; Arkansas 1/20c; Florida 1/8c; Illinois 3/100c; Indiana 1/5c in lots of 25 bbls. or less, 2/25c in lots of more than 24 bbls.; Kansas 1/50c; Louisiana 1/32c; Minnesota 7/200c; Missouri 1/50c; Nebraska 3/100c; Nevada, gasoline 1/20c; North Carolina 1/4c; North Dakota 1/20c; Oklahoma 2/25c; South Carolina 1/8c; South Dakota 1/20c; Tennessee 2/5c; and Wisconsin 3/100c.
Kerosine inspection fees only: Iowa 3/50c; Michigan 1/5c per gal.

TANK WAGON PRICES

Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1.5c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes. These prices in effect Apr. 27, 1942 as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

S. O. Indiana (Cont'd)

Red Crown (*Regular Grade*)
Blue Crown (*Third Grade*)

Dealer Prices

	Red Crown Cons. T.W.	Red Crown	Blue Crown	Gasoline Taxes	Kerosine T.W.
Peoria, Ill.	10.7	9.2	9.1	4.5	10.1
Quincy, Ill.	8.9	7.9	7.9	4.5	10
Indianapolis, Ind.	11.6	9.7	9.6	5.5	*9.8
Evansville, Ind.	11.4	9.9	7.9	5.5	*9.6
South Bend, Ind.	12	10.5	10	5.5	*10.2
Detroit, Mich.	11.4	9.9	9.4	4.5	9.6
Grand Rapids, Mich.	11.4	9.3	9	4.5	9.6
Saginaw, Mich.	11.4	9.9	9.4	4.5	9.6
Green Bay, Wis.	12.2	10.7	9.7	5.5	10.6
Milwaukee, Wis.	12.1	10.6	10.1	5.5	10.5
La Crosse, Wis.	11.9	10.4	9.9	5.5	10.3
Minneapolis-St. Paul.	11.9	9.9	9.5	5.5	10.3
Duluth, Minn.	12.2	10.7	10.2	5.5	10.6
Mankato, Minn.	11.9	10.4	9.5	5.5	10.3
Des Moines, Ia.	11.4	9.9	9.4	4.5	*9.8
Davenport, Ia.	11.7	10.2	9.7	4.5	*10.1
Mason City, Ia.	11.7	10.2	9.7	4.5	*10.1
St. Louis, Mo.	10.3	8.8	8.6	*4.5	9.8
Kansas City, Mo.	10.4	8.9	7.9	*4.5	9.4
St. Joseph, Mo.	11	9	8	*4.5	9.6
Fargo, N. D.	12.9	11.4	10.5	5.5	11.3
Huron, S. D.	12.3	10.8	10.3	5.5	10.7
Wichita, Kans.	10.3	8.2	6.5	4.5	‖

Stanavo Aviation 73 Octane

Chicago, Ill.	15.7	4.5
Milwaukee, Wis.	15.9	5.5
Minneapolis, Minn.	15.7	5.5
St. Louis, Mo.	15.2	*4.5
Kansas City, Mo.	14.8	*4.5
Fargo, N. D.	16.7	5.5
Huron, S. D.	16.1	5.5

	Oleum Spirits	V.M.&P. Naphtha	Stanisol	*Taxes
(Prices are base prices before discounts)				
Chicago	13.5	13.8	12.8	4.5
Detroit	15.8	15	16.3	4.5
K. C., Mo.	13.3	14.3	13.8	1.5
St. Louis, Mo.	13.7	14.7	13.2	1.5
Milwaukee	14.4	15.4	14.9	5.5
Minneap'ls	14.2	15.2	13.5	5.5

Fuel Oils T. W.

Chicago

	Standard Heater Oil
1-99 gals.	9
100-149 gals.	8
150 gals. & over	7.5

	Stanolex Fuel Oil No. 1	Stanolex Furnace Oil
1-99 gals.	8.5	8.5
100-149 gals.	7.5	7.5
150-399 gals.	7.5	7.5
400 gals. & over	7	7

	Stanolex Fuel Oil A	Stanolex Fuel Oil B
1-99 gals.	8	8
100-399 gals.	7	7
400-749 gals.	6	6
750 gals. & over	5.25	5.25

Stanolex Bunker C Fuel Oil

1-399 gals.	6.5
400-999 gals.	5.5
1000 gals. & over	4.5

Other Points: Indianapolis	Stanolex No. 1	Stanolex Furnace Oil
1-99 gals.	....	*8.7
100 gals. & over	....	*7.7
Detroit		
1-99 gals.	....	7.8
100 gals. & over	....	6.8
Milwaukee		
1-99 gals.	....	8.7
100 gals. & over	....	7.7
Minneapolis		
1-99 gals.	....	8.5
100 gals. & over	....	7.5
St. Louis		
1-99 gals.	8.3	7.8
100 gals. & over	7.3	6.8
Kansas City		
1-99 gals.	....	7.6
100 gals. & over	....	6.6

*Taxes: In gasoline tax column are included these city taxes—Kansas City, St. Joseph, and St. Louis, 1c. Indiana kerosine and fuel oil prices are ex 4c state tax; Iowa kerosine prices are ex 3c state tax. In naphtha tax column are included 1.5c federal tax and state taxes.

S. O. Nebraska

(*Regular Grade*)

	T.W. Dealer	Gasoline Taxes	Kerosine T.W.
Omaha	11.4 8.9	6.5	9.8
McCook	10.5 9.4	6.5	9
Norfolk	11.9 10.4	6.5	10.3
North Platte	11 9.9	6.5	10
Scottsbluff	12.4 9.5	6.5	9.5

S. O. Louisiana

Esso Gasoline (*Regular Grade*)

	Consumer Tank Wagon	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
New Orleans, La.	8.75	9.25	8.5	*9
Baton Rouge, La.	8.75	9.25	8.5	*9.5
Alexandria, La.	8.75	9.25	8.5	*9.5
Lafayette, La.	9	9.5	8.5	*9
Lake Charles, La.	9	9.5	8.5	*11
Shreveport, La.	8.5	9	8.5	*8
Knoxville, Tenn.	11.5	12	8.5	12.5
Memphis, Tenn.	8.75	9.25	8.5	10.5
Chattanooga, Tenn.	10.5	11	8.5	11
Nashville, Tenn.	10.5	11	8.5	10
Bristol, Tenn.	9.75	10.25	8.5	12
Little Rock, Ark.	9.5	10	8	10

*Louisiana kerosine prices are ex 1c state tax.

Discounts:

Esso Gasoline—To undivided dealers, 0.5c off dealer t.w.

Humble Oil & Refining Co.

Humble Motor Fuel (*Regular Grade*)
Thriftane (*Third Grade*)

	Humble *Tank Wagon	Humble Retail	Thriftane *Tank Wagon	Thriftane Retail	Gasoline Taxes
Dallas, Tex.	8.5†	10.5	7.5†	8.5	5.5
Ft. Worth, Tex.	8.5††	10.5	7.5‡	9	5.5
Houston, Tex.	8.5	12.5	7.5	10.5	5.5
San Antonio, Tex.	8.5	12.5	7.5	10.5	5.5

	Kerosine *Tank Wagon	Kerosine Retail
Dallas, Tex.	7	11
Ft. Worth, Tex.	7	11
Houston, Tex.	8	11
San Antonio, Tex.		10

74 Oct. Aviation Gasoline, Clear	Tank Car
FOB Baytown, Tex.	8.5

*To all classes of dealers & consumers.
†Less 1c allowance to dealers only.
‡Less 1½c allowance to dealers only.
††Less 2c allowance to dealers only.

The Texas Co.

	Gasoline—Dealer Fire-Chief (*Regular*)	T.W. Indian (*3rd Grade*)	Gasoline Taxes
Dallas, Tex.	8.5*	7.5*	5.5
Ft. Worth, Tex.	8.5*	7.5*	5.5
Wichita Falls, Tex.	8.5	7.5	5.5
Amarillo, Tex.	8.5	7.5	5.5
Tyler, Tex.	8.5*	7.5*	5.5
El Paso, Tex.	9.5	8.5	5.5
San Angelo, Tex.	8.5	7.5	5.5
Waco, Tex.	8.5*	7*	5.5
Austin, Tex.	8.5	7.5	5.5
Houston, Tex.	8.5	7.5	5.5
San Antonio, Tex.	8.5	7.5	5.5
Port Arthur, Tex.	8.5	7.5	5.5

*Less 1c temporary allowance to all dealers.

Continental Oil Co.

(N.B. Prices are Continental's "structural" prices. Prices do not reflect temporary reductions made to meet local competition)

	Conoco Bronz-z-z (*Regular*) †Tank Wagon	Demand (*3rd Grade*)	Gasoline Taxes	Kerosine T.W.
Denver, Col.	11	10	5.5	11
Grand Junction, Col.	12	11	5.5	12
Pueblo, Col.	10.5	9.5	5.5	10.5
Casper, Wyo.	11.5	10.5	5.5	12
Cheyenne, Wyo.	11	10	5.5	11.5
Billings, Mont.	12.5	11.5	6.5	12.5
Butte, Mont.	13.5	12.5	6.5	13.5
Great Falls, Mont.	12.5	11.5	6.5	12.5
Helena, Mont.	13	12	6.5	13
Salt Lake City, Utah	13.5	12.5	5.5	14.5
Boise, Ida.	14.1	13.1	6.5	16.5
Twin Falls, Ida.	15.6	14.6	6.5	17
Albuquerque, N. M.	10.5	9.5	*7	10
Roswell, N. M.	10	9	*7	9.5
Santa Fe, N. M.	10.5	9.5	*7.5	10
Ft. Smith, Ark.	9.5	9.25	*7	9.5
Texarkana, Ark.	9	8	*5.5	9
Muskogee, Okla.	9.5	8.5	7	8.5
Oklahoma City, Okla.	9.5	8.5	7	8.5
Tulsa, Okla.	9.5	8.5	7	8.5

*Taxes: In gasoline tax column are included these city taxes—Albuquerque, & Roswell, 0.5c; Santa Fe, 1c. Texas 4c state tax applies within city limits of Texarkana, Ark.; Okla. 5.5c state applies within city limits of Ft. Smith, Ark.
†To consumers & dealers.

S. O. California

Standard Gasoline (*Regular Grade*)
Flight Gasoline (*Third Grade*)

	Standard Posted Net Tank Truck	Standard Posted Retail	Flight Posted Net Tank Truck	Flight Posted Retail	Gasoline Taxes
San Francisco, Cal.	10	14	9	12	4.5
Los Angeles, Cal.	9.5	13.5	8.5	11.5	4.5
Fresno, Cal.	11	15	10	13	4.5
Phoenix, Ariz.	12	16	10	13	6.5
Reno, Nev.	12	16	11	14	5.5
Portland, Ore.	10.5	14.5	9.5	12.5	6.5
Seattle, Wash.	10.5	14.5	9.5	12.5	6.5
Spokane, Wash.	12.5	16.5	11.5	14.5	6.5
Tacoma, Wash.	10.5	14.5	9.5	12.5	6.5

Std. Aviation 73

	Posted Net Tank Truck	Gasoline Taxes	Kerosine Tank Truck
San Francisco, Cal.	12.5	4.5	11.5
Los Angeles, Cal.	12	4.5	10
Fresno, Cal.	13.5	4.5	12.5
Phoenix, Ariz.	14.5	6.5	12.5
Reno, Nev.	14.5	5.5	13.5
Portland, Ore.	13	6.5	13.5
Seattle, Wash.	13	6.5	13.5
Spokane, Wash.	16	6.5	16.5
Tacoma, Wash.	13	6.5	13.5

Discounts:

Resale & Commercial: T.C. deliveries 0.25c per gal. off posted net tank truck.

Commercial: Retail deliveries, and /or tank truck deliveries of less than 40 gals., 4c per gal. above posted net tank truck price for Standard Aviation and Standard Gasoline, and 3c per gal. above posted net tank truck for Flight Gasoline, except single deliveries of less than 40 gals. to Marine trade only, which are billed at posted net tank truck price.

Canada

PRICES ON IMPERIAL OIL, LTD.

Per Imperial Gallon, which is 1.2 U. S. Gallons

3-Star Imperial Gasoline (*Regular Grade*)

	†Gasoline T.W.	*Gasoline Taxes	†Kerosine T.W.
Hamilton, Ont.	17.5	11	18
Toronto, Ont.	17.5	11	18
Brandon, Man.	21	10	23
Winnipeg, Man.	20.5	10	22.5
Regina, Sask.	18	10	20
Saskatoon, Sask.	20.8	10	22.8
Edmonton, Alta.	18.9	10	20.9
Calgary, Alta.	16	10	18
Vancouver, B. C.	15	10	24
Montreal, Que.	17	11	17.5
St. John, N. B.	16.5	13	19
Halifax, N. S.	16.5	13	19

*Includes 3c Federal, an l Provincial taxes.
†To divided & undivided dealers.

Tank Wagon Price Changes
(These changes have been made in price tables)

S. O. Indiana—Red Crown Gasoline:
Chicago t.w. & dealer cut 0.7c Apr. 27.

S. O. Indiana—Blue Crown Gasoline:
Chicago dealer cut 0.1c Apr. 27.

S. O. Nebraska—Red Crown Gasoline:
McCook t.w. cut 1.5c Apr. 4.

S. O. Nebraska—Kerosine:
McCook cut 0.5c Apr. 4.

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon:
Alabama 1/40c on gasoline, 1/2c on kerosine; Arkansas 1/20c; Florida 1/8c; Illinois 3/100c; Indiana 1/5c in lots of 25 bbls. or less, 2/25c in lots of more than 25 bbls.; Kansas 1/50c; Louisiana 1/32c; Minnesota 7/200c; Missouri 1/50c; Nebraska 3/100c; Nevada, gasoline 1/20c; North Carolina 1/4c; North Dakota 1/20c; Oklahoma 2/25c; South Carolina 1/8c; South Dakota 1/20c; Tennessee 2/5c; and Wisconsin 3/100c.
Kerosine inspection fees only: Iowa 3/50c; Michigan 1/5c per gal.

CRUDE OIL PRICES

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates shown.

EASTERN & CENTRAL STATES FIELDS

PENNSYLVANIA GRADE

Posted by Jos. Seep Purch. Agency (Mar. 26, '42)

Bradford-Allegany	$3.00
Southwest Penna.	$2.65
Eureka (West Va.)	$2.59
Corning, O. (May 27, '41)	$1.31

Posted by The Pennzoil Co. (Mar. 26, '41)

National Transit	$2.93*

Posted by Valvoline Pipe Lines (Mar. 26, '42)

Bradford (Elk & McKean Counties, Pa.)	$3.00
Warren, Forest, Venango, Clarion & Butler Counties, Pa.	$2.93
Alleghany, Beaver, Washington & Greene Counties, Pa.	$2.65
West Virginia	$2.59
Southeastern Ohio	$2.55

*Applies to Cochran, Franklin, Hamilton & Doolittle districts; prices in other lower districts range down to $2.88 per bbl. at well.

MICHIGAN

Posted by Pure Oil Co. (May 27, '41)

Midland, Midland County	$1.44
Sherman	$1.39

Posted by Simrall Corp. (May 27, '41)

Greendale, Porter, Vernon, Crystal & Wise	$1.44
Buckeye, Bentley, Edenville, Beaverton & Monitor (sweet crude type)	$1.42
Freeman, Redding, Lincoln & Winterfield	$1.39
West Branch-Arenac	$1.24
Hamilton-Grout	$1.29

Posted by Sohio Corp. (Mich. Div.)

Traverse crude in Allegan, Kent, Ottawa & Van Buren Cos. (June 2, '41)	$1.45
Trenton crude. Monroe Co. (June 2, '41)	$1.39

Posted by Bay Pipe Line Corp. (May 27, '41)

Saginaw & Wise	$1.44	Buckeye, Bentley & Kawkawlin	$1.42
Clare	$1.11	Adams (June 1, '41)	$1.27

ILLINOIS-INDIANA-KENTUCKY-OHIO

Posted by Sohio Corp. (May 21, '41)

Illinois Basin, including Griffin pool	$1.37
Carmi, Storms, Ill. area	$1.32
Birk City, Ky. area	$1.32
Corydon, Ky. area, Henderson	$1.32

Posted by Ohio Oil Co. (May 21, '41)

Illinois Basin	$1.37
Eastern Ill. & Western Ind.	$1.22

Posted by Carter Oil Co. (May 21, '41)

Loudon, Fayette Co. Ill.	$1.37

Posted by Mohawk Oil Lines, Inc. (May 21, '41)

Southern Illinois	$1.37

Posted by Ashland Oil & Transp. Co.

Somerset oil in Ash. Lines, Ky.: (June 19, '41)

Big Sandy River	$1.38	Kentucky River	$1.43

Posted by Ownesboro-Ashland Co.

Owensboro, Ky. area (May 21, '41)	$1.32

Posted by S. O. Ohio (Sept. 1, '41)

Lima, Ohio	$1.25
Cleveland, Lodi & Chatham (O.) areas	$1.30

MID-CONTINENT

OKLAHOMA-KANSAS-NORTH TEXAS

(See below for companies posting and dates)

Gravity	Schedule No. 1	Schedule No. 2	Schedule No. 3
Below 21	$0.85	$0.75	$0.81
21-21.9	.87	.78	.83
22-22.9	.89	.81	.85
23-23.9	.91	.84	.87
24-24.9	.93	.87	.89
25-25.9	.95	.90	.91
26-26.9	.97	.93	.93
27-27.9	.99	.96	.95
28-28.9	1.01	.99	.97
29-29.9	1.03	1.02	.99
30-30.9	1.05	1.05	1.01
31-31.9	1.07	1.07	1.03
32-32.9	1.09	1.09	1.05
33-33.9	1.11	1.11	1.07
34-34.9	1.13	1.13	1.09
35-35.9	1.15	1.15	1.11
36-36.9	1.17	1.17	1.13
37-37.9	1.19	1.19	1.15
38-38.9	1.21	1.21	1.17
39-39.9	1.23	1.23	1.19
40 & above	1.25	1.25	1.21

Above schedules posted by:

No. 1: **S. O. Indiana** May 20, '41 in Okla. & Kans. **Sinclair-Prairie** May 20, '41 in Okla. & Kans. beginning with 25-25.9. **Continental** May 19, '41 in Okla. & Kans beginning with Below 29 at $1.01. **Texaco** May 19, in Okla. & Kans. beginning with 28-28.9.

No. 2: **Carter** May 20, '41 in Okla. **Shell** Dec. 5, '41 in Okla. & Kans. **Magnolia** May 21, '41 in Okla.

No. 3: All Dec. 11, '41: **Stanolind & Continental** in N. Tex. **Sinclair-Prairie** in N. Central Tex. **Magnolia & Texaco** in N. & N. Central Tex. **Continental, Magnolia & Sinclair-Prairie** schedules begin with Below 29 at $0.97. **Texaco** schedule begins with 28-28.9.

TEXAS & NEW MEXICO FIELDS

Posted by Humble Oil & Refining Co.

(May 21, '41, except Panhandle, Tex. July 9, '41 and W. Central Texas Dec. 11, '41)

Gravity	Refugio	Texas Gulf Coast	Miran-do	Ana-huac	Dick-inson	East Central Texas	West Central Texas	Pan-handle, Texas	W. Texas & New Mex.	Hawkins Texas
Below 20	$1.08	$1.06	$1.03	$0.98	$0.93	....	....	$0.73	$0.70	$0.80
20-20.9	1.10	1.08	1.05	1.00	.95	....	....	.75	.72	.82
21-21.9	1.12	1.10	1.07	1.02	.97	....	....	.77	.74	.84
22-22.9	1.14	1.12	1.09	1.04	.99	....	....	.79	.76	.86
23-23.9	1.16	1.14	1.11	1.06	1.01	....	....	.81	.78	.88
24-24.9	1.18	1.16	1.13	1.08	1.03	....	....	.83	.80	.90
25 & Above	....	....	....	....	....	....	....	....	....	.92
25-25.9	1.20	1.18	1.15	1.10	1.05	$0.97	$0.91	.85	.82	....
26-26.9	1.22	1.20	1.17	1.12	1.07	.99	.93	.87	.84	....
27-27.9	1.24	1.22	1.19	1.14	1.09	1.01	.95	.89	.86	....
28-28.9	1.26	1.24	1.21	1.16	1.11	1.03	.97	.91	.88	....
29-29.9	1.28	1.26	1.23	1.18	1.13	1.05	.99	.93	.90	....
30-30.9	1.30	1.28	1.25	1.20	1.15	1.07	1.01	.95	.92	....
31-31.9	1.32	1.30	1.27	1.22	1.17	1.09	1.03	.97	.94	....
32-32.9	1.34	1.32	1.29	1.24	1.19	1.11	1.05	.99	.96	....
33-33.9	1.36	1.34	1.31	1.26	1.21	1.13	1.07	1.01	.98	....
34-34.9	1.38	1.36	1.33	1.28	1.23	1.15	1.09	1.03	1.00	....
35-35.9	1.40	1.38	1.35	1.30	1.25	1.17	1.11	1.05	1.02	....
36-36.9	1.42	1.40	1.37	1.32	1.27	1.19	1.13	1.07	1.04	....
37-37.9	1.44	1.42	1.39	1.34	1.29	1.21	1.15	1.09	1.06	....
38-38.9	1.46	1.44	1.41	1.36	1.31	1.23	1.17	1.11	1.08	....
39-39.9	1.48	1.46	1.43	1.38	1.33	1.25	1.19	1.13	1.10	....
40 & above	1.50	1.48	1.45	1.40	1.35	1.27	1.21	1.15	1.12	....

Refugio: Includes crude purchased in East White Point, Greta, Melon Creek, O'Connor-McFaddin, Plymouth, Saxet, Taft, & Tom O'Connor fields.

Texas Gulf Coast: Includes crude purchased in Amelia, Clear Lake, Goose Creek, Hastings, Magnet, Mykawa, Mykawa New, Raccoon Bend, South Thompsons, Sugarland, Thompsons, & Webster fields.

Mirando: Includes crude purchased in Blanchard, Bridwell, Colorado, Comitas, Eagle Hill, Escobas, Fitzsimmons, Glen, Government Wells (North & South), Heyser, Hoffman, Kelsey, Kohler, Loma Novia, Lundell, Manila, Mirando Valley, Placedo, Randado, Sarnosa, & Tesoro fields.

Anahuac: Includes crude purchased in Anahuac, Angleton, Cedar Point, Fishers' Reef, Hull (Old & New), Pierce Junction, Red Fish Reef, & Turtle Bay fields.

Dickinson: Includes crude purchased in Dickinson, Gilloc, Hardin, League City, & Rowan fields.

East Central Texas: Includes crude purchased in Anderson, Cherokee, Limestone, & Navarro Counties, and Navarro Crossing field.

West Central Texas: Includes crude purchased in Brown, Callahan, Comanche, Eastland, Fisher, Haskell-Jones, Shackelford, Stephens, & Throckmorton Counties.

Panhandle, Texas: Includes crude purchased in Carson, Gray, Hutchinson & Wheeler Counties.

West Texas & New Mexico: Includes crude purchased in Andrews, Crane, Crockett, Ector, Gaines, Glasscock, Howard, Reagan, Upton, Winkler, & Yoakum Counties, Texas; Lea County, N. M.

Hawkins: Includes crude purchased in Hawkins Field, Wood County, Texas.

Conroe	$1.43	**East Texas & Flag Lake**	$1.25	**Clark, Zoboroski**	$1.14
Tomball	1.40	**Flour Bluff, E. Flour Bluff**	1.33	**Alice, Benavides (N. Sweden), Sun.**	1.35
Van	1.08	**Salt Flat, N. Salt Flat**	1.14	**Ben Bolt, Clark-Muil, Tom Graham**	1.35
Talco	0.79	**Darst Creek, Hilbig, Carroll**	1.14	**Yates (Pecos)**	0.95
				La Rosa	1.33

MAGNOLIA PETROLEUM CO.

(May 21, '41)

Panhandle, Tex.—(July 9, '41)—Same as Humble except Magnolia begins with below 29 at $0.91.

West Texas—In Crane, Upton, Howard, Glasscock, Mitchell, Winkler, Cochran, Hockley, Yoakum & Gaines Cos., and in Pecos & Andrews Cos. beginning Apr. 1, '42—Same as Humble except Magnolia begins with Below 25 at $0.80.

N. Mexico—In Lea Co.—Same as Humble except Magnolia begins with Below 25 at $0.88 & ends with 36 & above at $1.04.

Cass & Panola Cos., Tex.—Below 25 at $0.88, plus 2c per degree of gravity to 40 & above at $1.20.

Mirando, Tex.—Same as Humble.

East Texas	$1.25	**Lytton Springs**	$1.17
Darst Creek	1.14	**Cleveland-Liberty**	
Luling	1.05	**Co.**	1.26
Talco	.79	**Tomball**	1.40

SINCLAIR-PRAIRIE OIL MARKETING CO.

Texas Panhandle—(May 23, '41)—Same as Humble except Sinclair-Prairie begins with Below 25 at $0.83.

West Texas & New Mexico—(May 30, '41)—Same as Humble except Sinclair-Prairie begins with Below 25 at $0.80.

Texas Gulf Coast—(May 21, '41)—Same as Humble.

Mexia District, Texas—(May 30, '41)—Same as Humble, East Central Texas, except Sinclair-Prairie also posts Below 25 at $0.95.

East Texas—(May 21, '41)	$1.25
Long Lake, Texas—(May 21, '41)	$1.23
Chapel Hill (Washington Co.) Tex.:	
Below 50 grav. (Jan. 20, '42)	$1.18
50 grav. & above (Feb. 2, '42)	$1.25

STANOLIND OIL PURCHASING CO.

(May 21, '41)

Clinton, Tex.—Same as Humble Tex. Gulf Coast except Stanolind begins with Below 21 at $1.08.

Fairbanks, N. Houston & Rosslyn, Tex.—Same as Humble Dickinson schedule.

Lake Creek, Tex.—(Apr. 9, '42)—Same as Humble Tex. Gulf Coast except Stanolind begins with Below 21 at $1.08.

E. Texas	$1.25	**Satsuma & Tomball, Tex.**	$1.40

STANOLIND OIL & GAS CO.

(May 21, '41)

W. Beaumont & Spindletop (Jefferson Co., Tex.) **& High Island** (Galveston Co., Tex.)—Same as Humble Tex. Gulf Coast.

Hendrick & Henderson (Winkler Co., Tex.)—Same as Humble West Texas except Stanolind begins with Below 26 at $0.82.

Jay Welder (Calhoun Co., Tex.)—Nov. 14, '41—Same as Humble Anahuac.

THE TEXAS CO.

(May 21, '41)

Panhandle, Tex.—Same as Humble except Texaco begins with 34-34.9 at $1.03.

W. Texas & Lea Co., N. M.—Same as Humble except Texaco posts $0.78 for 23.9 & below and ends with 36 & above at $1.04.

Texas Gulf Coast—Same as Humble except Texaco ends with 34 & above at $1.36.

Duval, Mirando, Tex.—Same as Humble Mirando except Texaco ends with 28-28.9 at $1.21.

Refugio, Tex.—Same as Humble except Texaco ends with 28-28.9 at $1.26.

East Texas	$1.25	**Conroe, Tex.**	$1.43
Darst Creek, Tex.	$1.14	**Hockley & Cochran Cos., Tex.**	.87

SHELL OIL CO., INC.

(May 20, '41)

West Texas & Lea Co., N. M.—Same as Humble except Shell ends with 36 & above at $1.04.

Fisher Co., Tex.—(Dec. 11, '41)—Same as Humble W. Central Texas except Shell begins with Below 25 at $0.89.

East Texas	$1.25
Livingston field, Polk Co., Tex.	$1.25
Pecos Co., Texas, (except Yates Shallow Pool)	.95
Pecos Co., Tex., Yates Shallow Pool	.82
Mercy field, San Jacinto Co., Tex. (Feb. 27, '42)	1.25

CONTINENTAL OIL CO.

Carson & Hutchinson Cos., Tex.—(July 9, '41)—Same as Humble Panhandle except Continental begins with Below 29 at $0.91.

Mirando, Tex.—(July 1, '41)—Same as Humble.

Wade City & Clara Driscoll, Tex.—(July 1, '41)—Same as Humble Refugio.

Alfred & Magnolia City, Tex.—(May 21, '41), $1.35

Eddy Co., N. M.—(May 30, '41)—Same as Humble N. M. schedule except Continental begins with Below 29 at $0.88.

PAN AMERICAN PRODUCTION CO.

(May 21, '41)

Hastings & S. Houston, Tex.—Same as Humble Tex. Gulf Coast except Pan Am. begins with Below 21 at $1.08.

Gillock, Tex.—Same as Humble Dickinson except Pan. Am. begins with Below 21 at $0.95.

East Texas	$1.25
Cayuga, Tex.	.90
Goodrich, Tex. (Dec. 1, '41)	1.20

CRUDE OIL PRICES

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates shown.

CALIFORNIA

Posted by S. O. California, May 23, 1941

(All gravities above those quoted take highest price offered in that field)

Gravity	Signal Hill (Long Beach)	Wilmington	El Segundo	Seal Beach	Huntington Beach	Inglewood	Olinda Brea Canon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Greeley, Canal, Wasco	Coles Levee	Mountain View	Elk Hills, Buena Vista Hills Midway-Sunset, Lakeview Area	Lost Hills	Coalinga	Gravity
14-14.9	....	$0.68	....	....	$0.71	....	$0.70	....	$0.70	$0.70	$0.70	$0.72	....	....	....	....	....	$0.73	$0.73	$0.73	14-14.9
15-15.9	....	.71	....	....	.75	$0.76	.72	....	.72	.71	.72	.72	....	....	....	....	....	.73	.73	.73	15-15.9
16-16.9	....	.74	$0.79	....	.79	.79	.75	....	.74	.73	.75	.72	....	....	....	....	....	.73	.75	.73	16-16.9
17-17.9	....	.78	.82	....	.82	.82	.78	....	.77	.76	.78	.72	....	....	....	....	....	.75	.78	.73	17-17.9
18-18.9	$0.80	.82	.86	....	.86	.85	.81	....	.80	.79	.82	.74	....	....	....	....	....	.78	.81	.73	18-18.9
19-19.9	.84	.86	.90	....	.89	.88	.85	....	.83	.82	.85	.77	....	....	....	....	$0.73	.81	.84	.75	19-19.9
20-20.9	.88	.90	.94	....	.93	.92	.88	....	.86	.85	.89	.80	....	....	....	....	.76	.85	.87	.77	20-20.9
21-21.9	.92	.94	.98	....	.96	.95	.91	....	.89	.89	.92	.84	....	....	....	....	.79	.90	.90	.80	21-21.9
22-22.9	.96	.98	1.02	$0.88	.99	.98	.95	....	.93	.93	.96	.87	....	....	....	....	.83	.94	.93	.83	22-22.9
23-23.9	1.00	1.02	1.05	.92	1.02	1.01	.98	....	.97	.98	1.00	.91	....	....	....	....	.87	.99	.96	.86	23-23.9
24-24.9	1.03	1.06	1.07	.97	1.05	1.04	1.01	....	1.01	1.02	1.03	.94	$0.99	....	....	....	.90	1.03	.99	.89	24-24.9
25-25.9	1.07	1.09	1.10	1.01	1.08	1.07	1.04	....	1.05	1.06	1.07	.98	1.02	....	....	....	.94	1.07	1.01	.92	25-25.9
26-26.9	1.11	1.12	1.12	1.06	1.11	1.10	1.08	....	1.09	1.10	1.11	1.01	1.06	....	....	....	.97	1.11	1.04	.95	26-26.9
27-27.9	1.15	1.15	1.15	1.10	1.14	1.14	1.11	....	1.13	....	1.15	1.05	1.10	$1.04	....	....	1.01	1.15	1.07	.98	27-27.9
28-28.9	1.18	1.18	1.17	1.15	1.17	1.17	1.14	....	1.17	....	....	1.08	1.13	1.08	....	....	1.04	1.19	1.10	1.00	28-28.9
29-29.9	1.20	1.21	....	1.19	1.20	1.20	....	$1.17	....	....	....	1.12	1.17	1.12	....	....	1.07	1.24	1.13	1.02	29-29.9
30-30.9	1.23	1.24	....	....	1.23	1.22	....	1.21	....	Elwood	....	1.15	1.21	1.15	$1.61	$1.09	1.10	1.28	1.16	1.04	30-30.9
31-31.9	....	....	....	....	....	1.24	....	1.25	....	Terrace	....	1.19	1.24	1.19	1.04	1.12	1.14	....	....	1.06	31-31.9
32-32.9	....	....	....	....	....	....	....	1.29	....	F.o.b. Ship	....	1.23	1.28	1.23	1.07	1.14	1.17	....	....	1.09	32-32.9
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.22	....	1.27	....	1.26	1.10	1.17	....	....	....	1.11	33-33.9
34-34.9	Kettleman Hills		....	....	....	....	....	1.36	....	1.25	....	1.31	....	1.30	1.13	1.20	....	....	....	1.13	34-34.9
35-35.9	....	$1.23	....	....	....	....	....	....	....	1.28	....	1.35	....	....	1.16	1.22	....	....	....	....	35-35.9
36-36.9	....	1.26	....	....	....	....	....	....	....	....	....	1.39	....	....	1.19	1.25	....	....	....	....	36-36.9
37-37.9	....	1.29	....	....	....	....	....	....	....	....	....	1.43	....	....	1.22	....	....	....	....	....	37-37.9
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.47	....	....	1.25	....	....	....	....	....	38-38.9
39-39.9	....	....	....	....	....	....	....	....	....	....	....	1.51	....	....	....	....	....	....	....	....	39-39.9
40-40.9	....	....	....	....	....	....	....	....	....	....	....	1.53	....	....	....	....	....	....	....	....	40-40.9

Playa Del Rey: (FOB Standard Pipe Line) 20-20.9, $0.80; 21-21.9, $0.84; 22-22.9, $0.87.
Wheeler Ridge: 22-22.9, $0.76; 23-23.9, $0.80; 24-24.9, $0.83.
Newhall, Kern River, Kern Front, McKittrick & Round Mountain: 14-14.9, $0.73.

LOUISIANA-ARKANSAS

Posted by S. O. Louisiana, May 22, '41

Gravity	Atlanta, Ark. et al.	De Soto, La. et al.	Rodessa, La. et al.	Bunkie, La. et al.	Darrow, La. et al.	University, La. (Baton Rouge)
40 & Above	$1.08	$1.18	$1.20	$1.30	$1.30	....
39-39.9	1.06	1.16	1.18	1.28	1.28	....
38-38.9	1.04	1.14	1.16	1.26	1.26	....
37-37.9	1.02	1.12	1.14	1.24	1.24	....
36-36.9	1.00	1.10	1.12	1.22	1.22	....
35-35.9	.98	1.08	1.10	1.20	1.20	....
35 & above	....	....	....	....	....	$1.36
34-34.9	.96	1.06	1.08	1.18	1.18	1.34
33-33.9	.94	1.04	1.06	1.16	1.16	1.32
32-32.9	.92	1.02	1.04	1.14	1.14	1.30
31-31.9	.90	1.00	1.02	1.12	1.12	1.28
30 & below	....	....	....	....	....	1.26
30-30.9	.88	.98	1.00	1.10	1.10	....
29-29.9	.86	.96	.98	1.08	1.08	....
28-28.9	.84	.94	.96	1.06	1.06	....
27-27.9	.82	.92	.94	1.04	1.04	....
26-26.9	.80	.90	.92	1.02	1.02	....
25-25.9	.78	.88	.90	1.00	1.00	....
Below 25	....	.86	.88	.98	....	....
24-24.9	.76	....	.88	....	.98	....
23-23.9	.74	....	.86	....	.96	....
22-22.9	.72	....	.84	....	.94	....
21-21.9	.70	....	.82	....	.92	....
Below 21	.68	....	.80	....	.90	....

Atlanta schedule includes Buckner, Lewisville, Magnolia, Village & Schuler (Jones Sand), Ark.

De Soto schedule includes Sabine, Fouke, Homer, Miller co., Nebo & Sugar Creek.

Rodessa schedule includes Cotton Valley & Shreveport (Cross Lake) ending with Below 25 at $0.88; Anse La Butte (Aug. 1, '41); Caddo (Oct. 15, 1941). Bunkie schedule includes Eola, Olla, & South Olla.

Darrow schedule includes Bayou Mallet, Choctaw, Jeanerette, Lirette, N. & S. Crowley, Port Allen, Port Barre, Potash, Roanoke, & St. Martinville.

Big Creek, Dorcheat, McKamie, Distillates (Sour) $1.15
Heavy Smackover Crude ..... .83
Cotton Valley Distillate (Sept. 1, '41) 1.40
Cotton Valley (Holloway Sand Crude) 1.25
Lisbon Distillate 1.20

(Continued next column)

LOUISIANA-ARKANSAS *(Cont'd)*

Posted by Shell Oil Co., Inc. (May 20, '41)

Gravity	Iowa	Roanoke	Gibson
Below 20	$0.99	$0.94	$0.89
20-20.9	1.01	.96	.91
21-21.9	1.03	.98	.93
22-22.9	1.05	1.00	.95
23-23.9	1.07	1.02	.97
24-24.9	1.09	1.04	.99
25-25.9	1.11	1.06	1.01
26-26.9	1.13	1.08	1.03
27-27.9	1.15	1.10	1.05
28-28.9	1.17	1.12	1.07
29-29.9	1.19	1.14	1.09
30-30.9	1.21	1.16	1.11
31-31.9	1.23	1.18	1.13
32-32.9	1.25	1.20	1.15
33-33.9	1.27	1.22	1.17
34 & above	1.29	1.24	1.19

Iowa schedule includes Black Bayou & White Castle La. fields.

Roanoke schedule includes Chalkley, La. field.

Gibson schedule includes S. Houma, Hester & W. Lake Verret, La. fields.

Happytown field, St. Martin Par., La. $1.15

Posted by Arkansas Fuel Oil Corp.

Urania, La. (May 22, '41) $1.15

Posted by Continental Oil Co. (May 21, '41)

Tepetate, La. $1.18
Ville Platte, La. 1.20
Lake Arthur, La. 1.18
Ritchie, La. (Sept. 1, '41) 1.08

Abbeville, La.

Below 36 $1.07	37-37.9 $1.11	39-39.9 $1.15
36-36.9 1.09	38-38.9 1.13	40 & above 1.17

CANADIAN FIELDS

Posted by Imperial Oil Limited

Western Ontario (Nov. 6, 1939)

Petrolia ..... $2.10 Oil Springs $2.17

Turner Valley Crude Oil (July 16, '41)

(Prices FOB producer's tankage)

33-33.9 $1.35	44-44.9 $1.57	55-55.9 $1.79
34-34.9 1.37	45-45.9 1.59	56-56.9 1.81
35-35.9 1.39	46-46.9 1.61	57-57.9 1.83
36-36.9 1.41	47-47.9 1.63	58-58.9 1.85
37-37.9 1.43	48-48.9 1.65	59-59.9 1.87
38-38.9 1.45	49-49.9 1.67	60-60.9 1.89
39-39.9 1.47	50-50.9 1.69	61-61.9 1.91
40-40.9 1.49	51-51.9 1.71	62-62.9 1.93
41-41.9 1.51	52-52.9 1.73	63-63.9 1.95
42-42.9 1.53	53-53.9 1.75	64 & over 1.97
43-43.9 1.55	54-54.9 1.77	

Absorption Gasoline (July 16, '41)

90% Rec., 20 lb. Reid v. p. $2.28
90% Rec., 17 lb. Reid v. p. 2.44

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co. (May 20, '41)

Salt Creek (except Tensleep crude), Midway & Dutton Creek, Wyo.

Below 29 $0.96	32-32.9 $1.04	36-36.9 $1.12
29-29.9 .98	33-33.9 1.06	37-37.9 1.14
30-30.9 1.00	34-34.9 1.08	38-38.9 1.16
31-31.9 1.02	35-35.9 1.10	39-39.9 1.18
		40 & above 1.20

Wyoming:		Wyoming:	
Tensleep Crude	$0.6785	Grass Creek Light	$1.00
Frannie Light	.70	Grass Creek Heavy	.50
Frannie Heavy	.47	Elk Basin	1.00
Hamilton Dome	.45	Iles, Colo.	1.07

Posted by Ohio Oil Co. (May 20, '41)

Elk Basin, Wyo. $1.00
Grass Creek Wyo., Light 1.00
Rock Creek, Wyo. 1.15
Lance Creek, Wyo., (July 1, '41) 1.12

Posted by Continental Oil Co. (May 21, '41)

Ft. Collins & Wellington, Col.

Below 29 $0.96	32-32.9 $1.04	36-36.9 $1.12
29-29.9 .98	33-33.9 1.06	37-37.9 1.14
30-30.9 1.00	34-34.9 1.08	38-38.9 1.16
31-31.9 1.02	35-35.9 1.10	39-39.9 1.18
		40 & above 1.20

Canon City & Florence, Col. $1.05	Big Muddy, Wyo., (May 30, '41) $1.08
Cat Creek, Mont. 1.15	Lance Creek, Wyo., (July 1, '41) 1.12

Posted by Independent Pipe Line Co. (Aug. 1, '41)

Falls City, Neb., field price $0.90
Falls City, Neb., loaded in tank cars 0.95
Shubert, Neb., loaded in tank cars 0.97

SOUTHEASTERN FIELDS

Posted by Allied Pipe Line Corp.

Tinsley (Miss.) Crude (Oct. 16, '41)

24-24.9 $0.745	32-32.9	$0.905
25-25.9 .765	33-33.9	.925
26-26.9 .785	34-34.9	.945
27-27.9 .805	35-35.9	.965
28-28.9 .825	36-36.9	.985
29-29.9 .845	37-37.9	1.005
30-30.9 .865	38-38.9	1.025
31-31.9 .885	39-39.9	1.045
	40 & above	1.065

Pickens (Miss.) Crude (Dec. 16, '41)

24-24.9 $0.685	32-32.9	$0.845
25-25.9 .705	33-33.9	.865
26-26.9 .725	34-34.9	.885
27-27.9 .745	35-35.9	.905
28-28.9 .765	36-36.9	.925
29-29.9 .785	37-37.9	.945
30-30.9 .805	38-38.9	.965
31-31.9 .825	39-39.9	.985
	40 & above	1.005

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To Lease

To Lease clean storage tanks in Detroit. For Hire one 4500-gallon semi tank truck; one 3250-gallon semi tank truck. Box No. 100.

For Sale

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2136—Gallon Butler Trailow Trailer. Four Compartments with 2" manifold located at the rear. Equipped with dual 8¼" x 20" tires, fair condition. Priced to sell.

Cushing Refining & Gasoline Company
Cushing, Oklahoma

TRUCK TANKS

An Eastern Manufacturer has on hand a limited number of new 1950 gallon truck tanks for immediate shipment. Specifications and prices on request.

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SMALL REFINERY FOR SALE

A rare opportunity for an oil refiner to buy a small and complete plant for refining crank case oil, lubricating distillates, etc. Steel & asbestos buildings, 3 acres land, complete equipment. Tank capacity 209,000 gallons. Compressors, oil coolers, pumps, steam lines, two Scotch boilers, laboratory, still, condenser, sectional dephlegmator. Located in Philadelphia near Atlantic Refining, Gulf, and Standard of N. J. main plants.

With war restrictions on oil this plant answers a difficult problem. Circular mailed upon request.

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Realtors
Finance Building, Philadelphia
Bell Phone: RITtenhouse 3482

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with Motors—Slightly Used

1—Serial No. 790293—5", 5 stage, 6" suction. Name plate rating, 500 GPM, 1050 ft. Total Dynamic head, 1750 RPM, 300 HP, 5" discharge.
1—Serial No. 768147, 5", 5 stage, 5" discharge, 6" suction. Name plate rating, 1000 GPM, 750 ft. Total Dynamic head, 1750 RPM, 300 HP.
1—Serial No. 736268—5", 5 stage, 5" discharge, 6" suction. Name plate rating, 1000 GPM, 750 ft. Total Dynamic head, 1750 RPM, 300 HP.

Offered subject to prior sale!

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Copy must reach us not later than Saturday preceding date of issue.

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These rates were effective February 25, 1942

National Petroleum News

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V. B. GUTHRIE, *Managing Editor*

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Washington, D. C., 803-805 National Press Bldg., Telephone, NAtional 3478.

Tulsa, Okla., 904 World Bldg., Telephone, 3-7132.

Los Angeles, 610-A Hillstreet Bldg., Telephone, VAndike 2845.

Chicago, 59 E. Van Buren Street, Telephone, Harrison 5901-2-3.

Subscription rate $5 per year in United States, Mexico and Pan-American Countries; $6.50 in Canada and Foreign Countries. Current copies 20 cents, except special issues; back copies more than two months old 30 cents per copy.

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Texaco Development Corp.
Timken Detroit Axle Co.
Tokheim Oil Tank Co. Inside Front Cover
Universal Oil Products Co.
Viking Pump Co.
Wayne Pump Co.
Wilson & Bennett Mfg. Co.

PERSONALS

Sigmund Dornbusch, President of Dornoll Products Co., was one of the five-man Bridge Whist Club team which won the coveted Vanderbilt Cup in the finals played in New York recently. Other members of Mr. Dornbusch's team also are business men not identified with professional bridge. Mr. Dornbusch was on the New York Whist Club team which won the Vanderbilt trophy in 1939.

* * *

To commemorate the 20th anniversary of his company, **W. K. Warren,** Tulsa, president of Warren Petroleum Corp., was presented with a gold pin bearing a raised platinum "W" containing a diamond and a parchment scroll bearing the signatures of all employes participating.

* * *

After a two-week rest and physical check-up in Washington's Walter Reed Hospital, **Maj. George H. Schoenbaum** is back at his Virginia home and expects to resume wartime activities soon. Recently, he was appointed chief of the Chemical and Petroleum Section, Resources Division, Services of Supply, U. S. Army.

In point of service to the government, Major Schoenbaum is the oldest oil man in Washington, first serving with the National Defense Advisory Commission, in June, 1940.

The last time NPN mentioned Oil Man-Officer Schoenbaum, (*Dec.* 10, 1941, *p.* 22) he was a Captain. In Army parlance, he has now reached his "majority", which means that he now wears the gold leaf of a major.

* * *

Ensign Singleton

Ensign D. A. Singleton, U.S.N.R., son of **M. R. Singleton,** vice-president of Valvoline Oil Co., has been awarded the Navy Cross for distinguished service during Japan's attack on Pearl Harbor. Ensign Singleton was assistant manager of Valvoline's Edgewater, N. J., terminal before joining the Navy in July, 1941. He arrived at Pearl Harbor July 31, 1941, where he was designated fuel officer, in which capacity he still serves.

* * *

A. M. "Mil" Petty, NPN's news editor, who has been transferred to our Washington bureau for the duration, has performed something of a miracle. He found a house in the Washington area after only 10 days of looking. First time he lost it by half an hour. But the Army officer who moved in from Texas was transferred to California four days later. And, Mil, alert news hound, heard about it and was on the spot to snag the house on the rebound. Now, he's down there with Mrs. Petty and the three Petty girls, with roots planted again in his home state of Virginia (Alexandria, Va., but only 20 minutes from Washington).

* * *

Mr. and Mrs. Michael L. Benedum have returned to Pittsburgh after spending four and one-half months at their winter home in Miami.

Mr. Benedum, "America's No. 1 wildcatter", is presently occupied in watching the progress of Benedum and Trees' test well in the west central area of West Virginia (*NPN April 8th*).

* * *

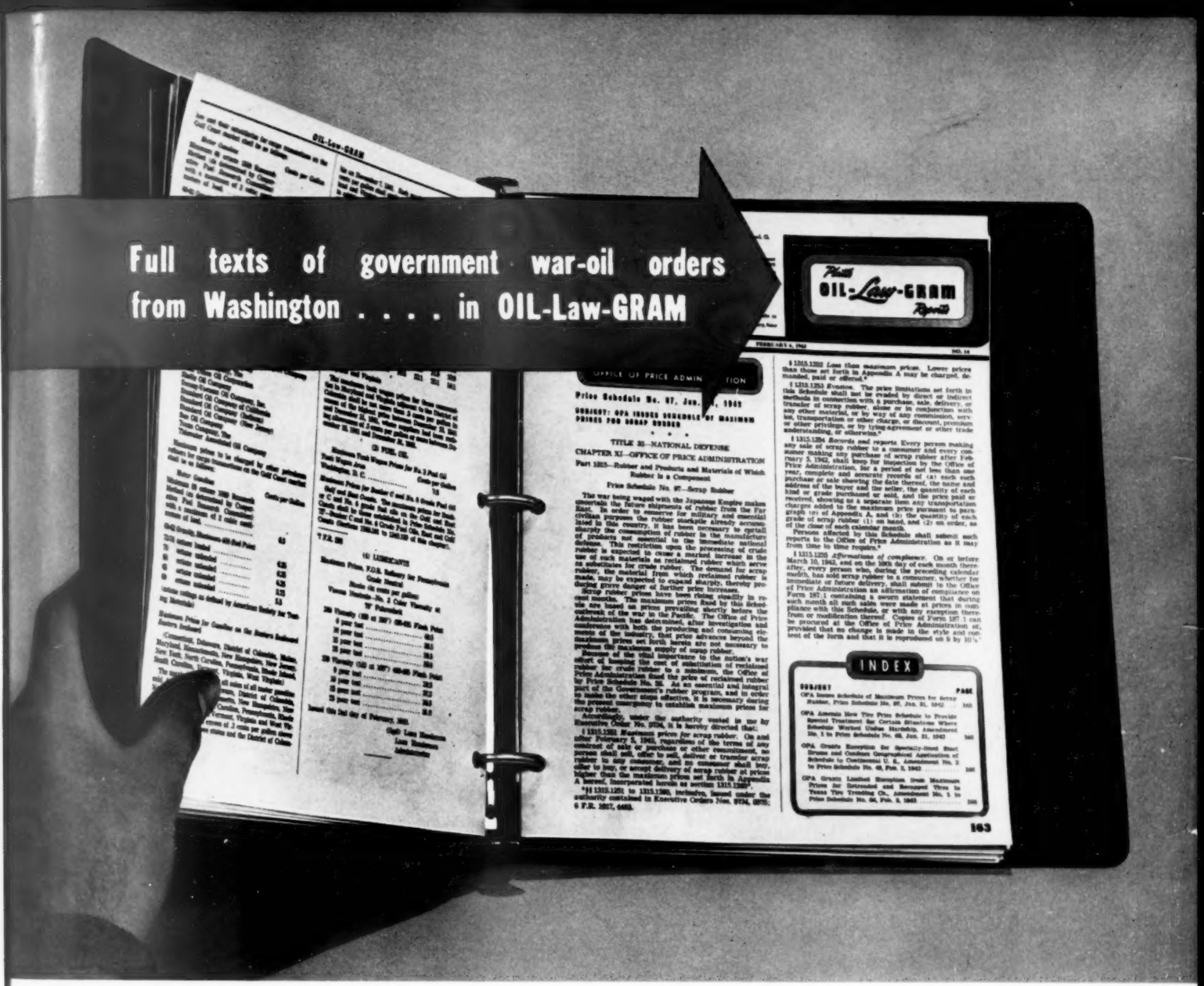
W. L. Scott, Mt. Pleasant, Tex., sales manager for Talco Asphalt & Refining Co., has been appointed sales manager for Southport Petroleum Co., Dallas. Mr. Scott will continue in his position as sales manager for Talco, but his office will be in Dallas.

* * *

Robert L. Minckler, director of petroleum supply for OPC, who was sent to Houston to develop with District 3 functional committees the refinery and transportation plans announced April 23, left Houston many times during the nine days he spent there—according to published reports. Mr. Minckler several times made reservations to leave, then after last-minute conferences with Washington or committee heads, decided to stay longer. Each time newspapers reported his departure. On April 23-24, he was variously reported as leaving for Mississippi (which prompted him to ask friends here what he might be doing there), for San Francisco and for Washington. Mr. Minckler, amused, has avidly kept track of his fictitious meanderings.

* * *

Earlier this month, North Carolina oil men were getting together frequently in a series of district meetings held by the North Carolina Petroleum Industries Committee. Above photo, taken April 8 at Raleigh, scene of the 5th meeting in an 8-meeting series, shows some 150 petroleum marketers from Wake and nearby counties gathered for the concluding banquet



SO that you are accurately and quickly informed of what the government says in its war-oil orders, the complete texts of all orders, recommendations, decrees, priorities, and interpretations are printed in Oil-Law-Gram and rushed to subscribers. Since July 20, 1941, 247 oil orders have been issued by OPC, OPA, and WPB.

These texts are your permanent record. They will help you conduct your business within the limits of the law.

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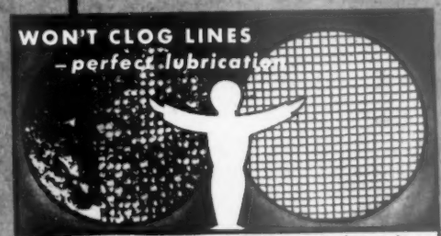
Thousands of new car owners with high compression engines complain about excessive knocking. SUN Oils, used exclusively, will prevent carbon knocks—they form no hard carbon.



Clogged lines—clogged pump screens—mean inadequate flow of oil and possible damage to bearings. SUN Oils won't clog lines or screens. They are pure, safe lubricants.

with the help of oils blended with

SUN No. 96

Today's cars must be tomorrow's transportation and you are the guardians of their life. Today you must sell lubricants that make cars last longer and run better to safeguard the life line of your customers' cars . . . and the future of your business.

SUN No. 96 answers this demand for high quality and proved wear protection. This heavy base golden stock is pre-tested more than 70 times from crude to finished product to assure lubrication that will help lengthen motor life. It has a carbon content of less than 2/10 of 1% and blends with a suitable 200 vis coastal oil to produce SAE 20 to 50 grades of low carbon, durable motor oils.

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COMPLETE LINE OF GREASES
PRE-TESTED MORE THAN 70 TIMES

TECHNOLOGY DEPT.

NATIONAL PETROLEUM NEWS

Volume 34 | May 6, 1942 | Number 18

MAY 7 - 1942 DETROIT

Halt Rail, Tanker 'Gas' Haul to East

NEW YORK — Eastern oil companies get wires from Deputy Petroleum Co-ordinator Davies requesting that they discontinue use of tankers and tank cars in hauling gasoline into District 1. Davies asks switch to movements of heavy fuel oils. Page 3.

Tanker-Free East Is Aim of Studies

WASHINGTON—Oil industry and Office of Petroleum Co-ordinator work on plans to move all oil products to East Coast by rail, pipeline, tank truck and barge hauls. Southeastern truckers lay ground-work for overall truck plan. Page 21.

Higher Oil Quotas Refused by Ickes

WASHINGTON — OPC refuses requests of Kansas and Texas for higher May quotas. Texas, meantime, sets 10-day order based on April production. Commissioner Sadler says it would be "dereliction of duty" to accept OPC quota as final. Page 17.

Join This Campaign!

Care for your Car . . . for your Country

Put the slogans "Oil is Ammunition, Use it Wisely" and "Care for Your Car—For Your Country" on the lips of every service station operator. Write the Petroleum Industry War Council, 712 Chanin Bldg., New York, N. Y., for details on the part YOU can play.

OPA May Subsidize Oil Costs

WASHINGTON—No further price advances for the oil industry—that seems to be the new policy developing here.

Instead, OPA is working on a plan of government subsidy payments for added wartime costs which cannot be absorbed in a "roll back" from retailer to refiner.

Where does the oil industry stand in the general price "freeze"? Best guess: not under it—as regards prices—but maybe as to pricing practices not covered by specific orders. And that may include opening up price records to all comers. Page 3.

Text of retail gasoline price "freeze" order. Page 12.

BULLETINS

East's 'Gas' Cut 50%

Washington—Gasoline and fuel oil deliveries will be cut to 50% of normal demand in the Far East as of May 16, War Production Board announced late May 5. At present, one-third cut is in effect in East Coast and Pacific Northwest.

SUBSIDY DISCUSSED

WASHINGTON—Dr. George W. Stocking, head of OPA's fuel section, talked for 2 hours May 5 before Petroleum Industry War Council, discussing, among other things, a plan for subsidizing added wartime costs of oil industry which, he said, is being developed by OPA with other governmental agencies. (Earlier story p. 3).

EQUIPMENT ORDER

WASHINGTON — By General Conservation Order M-126, WPB on May 5 ordered production stopped on anti-freeze containers of less than 5-gal. capacity; car lifts and racks; gasoline dispensing pumps; kerosine pumps; air pumps and grease guns; oil pumps, except barrel pumps; and lubsters.

TEXAS QUOTA

AUSTIN—Texas will go on producing on April quota until May 10, despite OPC objections, then issue special proration order covering last of month, survey of commissioners showed.

Mr. Ickes and Railroad Commission so far are deadlocked over OPC 20% cut in Texas' May production.

U. S. CRUDE OUTPUT

NEW YORK—Crude production in the U. S. was off 246,350 bbls. daily at 3,335,000 bbls., according to American Petroleum Institute figures for week ended May 2.

Ickes Sees Chance Of More Rationing To Conserve Tires

WASHINGTON—An Administration move to apply gasoline rationing on a nationwide basis to conserve tires is possible, Co-ordinator Ickes testifies at reopening of Cole committee hearing. Meantime, OPA starts distribution of ration cards for East. Page 5.

War-Design Speeds Refinery Building

WASHINGTON — Construction of new refineries is speeded by adoption of "wartime design" suggestions for substitution of non-critical for critical materials, OPC's equipment procurement chief reports, giving added suggestions. Page 13.

Hearings Continue On Alcohol-Rubber

WASHINGTON—Story of a synthetic rubber, made from butadiene produced by a secret process using agricultural alcohol, unfolds at Gillette committee hearing. Polish inventor of the process used potatoes; claims grains are likewise successful. Page 16.

NEWS BRIEFS

Rail hauls to East decline to 564,750 bbls. daily. Page 24.

* * *

Wisconsin tank truck permits held up by state officials. Page 24.

* * *

Ickes, Eastman laud relaxation of truck barriers. Page 26.

* * *

OPA bans sale to drivers who abuse tires. Page 26.

* * *

Tapco still pushes plans for pipeline despite setbacks. Page 26.

* * *

Fuel oil preference ratings must be approved by WPB. Page 7.

* * *

Economic breakdown of oil companies feared if prices don't rise. Page 7.

* * *

Navy buys from Gulf Coast refiners who need business most. Page 16.

* * *

Senate Bill asks broad patent law revisions. Page 14.

* * *

Conversion to coal in East conserves fuel oil. Page 14.

* * *

Rubber-borne transportation control given to ODT. Page 4.

* * *

Senate group may seek to loosen tire rationing. Page 4.

* * *

Ickes' stand on oil regulation praised by state officials. Page 18.

* * *

NPN's Washington personality sketch—Dr. John W. Frey. Page 8.

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Fire!

FIG. 203-C

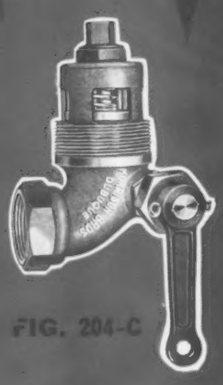


FIG. 204-C

FIG. 203-F

FIG. 131

MORRISON EMERGENCY VALVES ARE YOUR BEST TRUCK TANK INSURANCE

Every truck tank should have the additional protection of reliable emergency valves.

The danger of disastrous fires can be averted if truck tanks are equipped with these protective valves.

Your truck tank manufacturer will be glad to install Morrison emergency valves on your next truck tank.

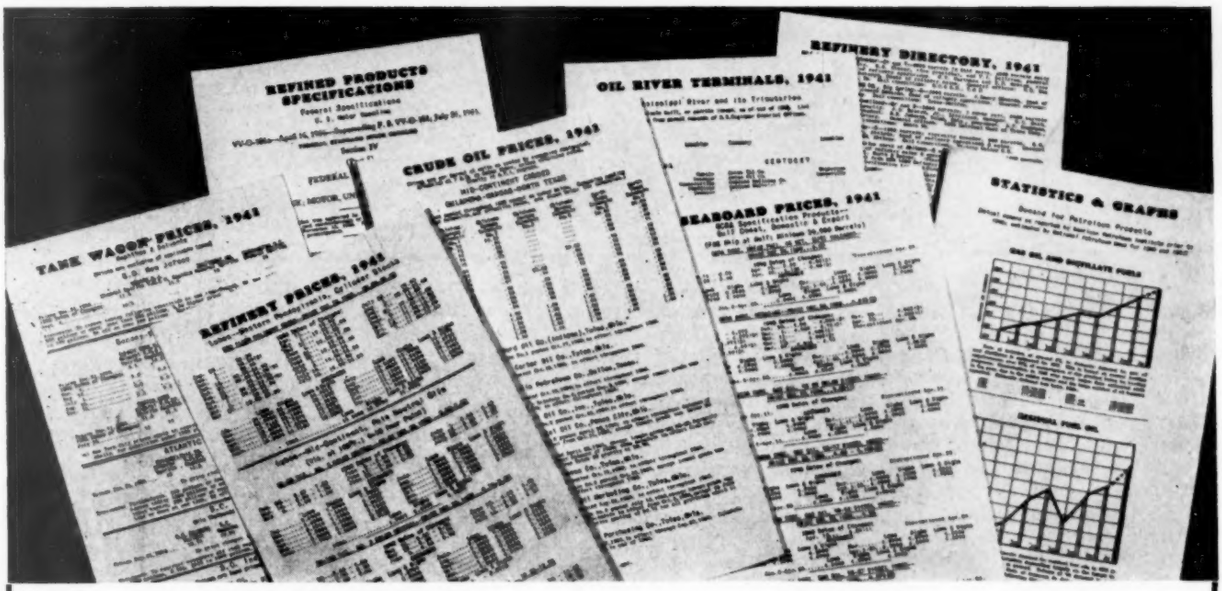
Any of these valves can be installed on any truck tank now in use. Make your truck tank and product safe with this easy installation.

Write for full information concerning these valuable valves.

MORRISON BROS. COMPANY

OIL EQUIPMENT HEADQUARTERS

DUBUQUE, IOWA



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Pages like these in Platt's Oil Price Handbook for 1941 give you complete, day-to-day price information—on petroleum products in various markets—during 1941. Page after page of refinery and seaboard prices of refined products, and tank wagon prices of petroleum products listed according to dates of changes, give you the complete price picture of 1941. Thirteen different sections give you—at your fingertips—market data that will save you hours of time searching for prices on a certain date during 1941.

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- **Fuel Oil tank wagon prices**
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1213 W. Third St., Cleveland, O.

Attached is my check covering ..... copies of Platt's Oil Price Handbook for 1941 at $12.50 per copy. (Ohio purchasers please add 3% tax to each order.)

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Company .....

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City ..... State .....

NATIONAL PETROLEUM NEWS—May 6, 1942—Vol. XXXIV—No. 18
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Texans Honor Humble's Harry Wiess

● Virtually sprayed by oil from the famed Spindletop gusher when it blew in near Beaumont in 1901, a 14-year-old high school student was destined to rise with the oil industry in the great hey-day that Spindletop started. Today that youth-grown-up, Harry Carothers Wiess, is president of Humble Oil & Refining Co., a titan in the industry and a civic leader of Texas.

Soft-spoken, reserved but friendly, Mr. Wiess was one of two oil men awarded plaques for outstanding contributions to the industry at the recent South Texas Chamber of Commerce's annual Oilmen's Jubilee at San Antonio. More than 200 prominent oil men from all parts of Texas and adjoining states gathered there to pay tribute to Mr. Wiess and the other award recipient, W. M. Griffith of Sinton, vice-president and general manager of Plymouth Oil Co.

Harry C. Wiess

Descendant of a pioneer Texas family and son of William Wiess and Louisa Elizabeth Wiess, he was born in Beaumont on July 30, 1887. He was attending Beaumont public school when the Spindletop gusher turned that city into a colossal mob scene of frenzied speculation and trading. The boom still was on when in 1903 he left for the Lawrenceville School in New Jersey. Two years later he entered Princeton University and in 1909 graduated with a degree in civil engineering.

With the Spindletop boom still strongly impressed on his mind, he returned to Beaumont in 1910 and began his career in the industry with the old Paraffine-Reliance Oil Co., serving as its president from 1912 until 1917. In that year, Paraffine-Reliance became one of the units in the organization of Humble, with Mr. Wiess becoming a director and vice-president of the new firm. Beginning in 1919, he devoted his full time to serving as vice-president in charge of manufacturing and sales, but even then he followed closely all other branches of the company's business.

In 1933 he became executive vice-president and four years later president, a position in which he concerns himself not only with the formulation of broad policies and programs, but also follows and supervises to an unusual degree all phases of operations.

He is chairman of the transportation committee for District 3 and a member of the Petroleum Industry War Council. He was chairman of the Houston Community Chest in 1931-32, a director of the Federal Reserve Bank of Dallas 1937-39 and chairman of the Finnish Relief Fund in Houston in 1940. Recently he accepted the Texas chairmanship for the United Service Organization's drive for funds.